

Fact sheet: shows oil mallee biodiversity benefits



By Jill Griffiths
Kondinin Group

The biodiversity benefits of oil mallees are explained in a new fact sheet recently released by the Future Farm Industries CRC (FFI CRC). The fact sheet is the first in a new series that will help make current research findings readily available to land managers.

Oil mallees are widely promoted as a woody perennial crop capable of delivering a variety of environmental benefits. A three-year study undertaken by FFI CRC and CSIRO has confirmed that biodiversity benefits are among these.

The FFI CRC has produced a fact sheet summarising the research results that can be downloaded from the FFI CRC website. More fact sheets will be produced in the future to aid in making current research findings readily available to land managers.

Among the most significant findings of the oil mallee biodiversity study is the revelation that oil mallees can provide important resources for wildlife.

key points

- Oil mallee plantations can provide food and shelter resources to native wildlife, but are not used as primary habitat
- Increasing farmland biodiversity improves environmental health and can assist with natural pest control, nutrient cycling and water infiltration
- The FFI CRC has produced a fact sheet explaining the biodiversity benefits of oil mallees.

CSIRO Sustainable Ecosystems researcher Dr Patrick Smith said that when the study started, he had expected oil mallees would not offer a lot to native wildlife.

“Even though oil mallees are a native plant, they are a single species and, planted in rows in a paddock, it didn’t look as if plantations would be very attractive to wildlife,” Dr Smith said.

However the study showed that animals – birds, reptiles and small mammals – regularly visited the oil mallee plantations to forage. Small birds also use the mallees for cover as they fly around the farm landscape.

“We looked thoroughly and found no evidence the animals and birds are nesting and breeding in the plantations. They are visiting – mostly at night – to forage for food like seeds, nectar, fungi and insects,” Dr Smith said.

“The mallee blossoms in particular attract a wide range of insects, birds and small mammals. These blossoms can be available up to nine months of the year depending on the species planted.”

Possum attraction

Researchers were particularly intrigued to find dozens of pygmy possums in the plantations. Edith Cowan University research student, Marie Short, undertook an honours project to ascertain where the pygmy possums coming from. Marie found possums were living in the hollows of old trees in the paddocks and along the roadside, which came into plantations at night to forage.

“The oil mallee plantations are not providing primary habitat,” Dr Smith said. “But they are providing valuable resources for wildlife.”

The biodiversity found in oil mallees will always be a subset of the biodiversity found in native bush; the plantations act as an adjunct to the remnant bush.

ABOVE: A new FFI CRC fact sheet outlines the biodiversity benefits offered by oil mallee plantations. (Photo: FFI CRC)

Oil mallee plantations in the study ranged in size from one to 18 hectares. Higher numbers of native mammals, birds and reptiles were recorded in plantations located adjacent to bush; isolated plantations recorded fewer animals. Planting other species with the oil mallees enhances biodiversity as it broadens the food resources available to wildlife.

Dr Smith said that in most plantations oil mallees would be harvested long before they developed fallen timber, tree hollows and other resources used as nest sites by animals. However, the lack of breeding sites within the plantations meant harvesting was likely to have only a minimal impact on the native animals. This impact can be further minimised by ensuring only a portion of a plantation is harvested in any given year. For example, every third belt in a paddock could be harvested each year during a three-year cycle. In this way, native wildlife would maintain access to some oil mallees.

As well as the biodiversity benefits, oil mallee plantations can provide significant other environmental benefits. These include groundwater management and salinity mitigation. They can also provide an alternative income stream to farmers.

The biodiversity fact sheet is available at: www.futurefarmcrc.com.au/documents/Biodiversitybenefitsofoilmales_000.pdf 

More information

Dr Patrick Smith, CSIRO Sustainable Ecosystems

T: (08) 9333 6467

E: patrick.smith@csiro.au