Biodiversity interactions with almond crops in the mallee – the conservation importance of living with nature.

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Abstract

Studies of biodiversity conservation in agricultural landscapes have almost always focused on remnants of native habitat. However, the conservation value of entire landscapes, including the agricultural components, is now being increasingly recognised. In the last decade, many areas of the mallee have undergone rapid changes due to the development of irrigated horticultural and other industries. The Robinvale almond production region in NW Victoria is an ideal location to study the relationships between agriculture and biodiversity. The region contains a diverse array of agricultural land-uses such as almond, olive, viticulture, citrus and wheat crops. It supports a number of rare or threatened species such as the regent parrot, and is undergoing continued transformations due to expansion of the almond industry.

I will present some key findings from a five year research project, which showed that almond plantations provide important habitat and refuge for many threatened species. Focussing on native bird interactions, we found that parrots appear to rely more on almond crops for food when environmental conditions (i.e. drought) limit other food resources. Almond crops also provide important ‘connections’ for regent parrots and other birds to move throughout the landscape. The behaviour of wild animal species in agricultural can certainly inflict costs to farmers through direct or indirect damage to crops, but also provide benefits through the provision of ecosystem services (e.g. control of agricultural pests).

The role of production land uses in supporting native birds needs to be recognised by conservation management agencies. Simply focusing on native vegetation for improving conservation outcomes for species such as the regent parrot would overlook important information about the potential contribution of almonds to species persistence. Likewise, a sole focus by farmers on intensive production would ignore many potential financial benefits that interactions with insects and native birds can provide, leading to better agricultural sustainability.