

Paddock Trees

WHY THEY ARE WORTH SAVING



Paddock trees are a beautiful and vital part of our landscape (Photo by Mason Crane)

Scattered paddock trees are a common feature across Australian agricultural landscapes, and are generally relics of the original woodlands and forests that once covered these landscapes. It is hard to imagine the countryside without scattered paddock trees, but that is the future many agricultural areas in our region are facing, given the current trend. A study conducted in the south west slopes predicts that within 120 years almost all paddock trees in the region will be lost, due primarily to a lack of recruitment.

The value of paddock trees

Paddock trees are considered a 'keystone' structure in agricultural landscapes. This means that they have a disproportional influence on how the environment functions. In Australia, paddock trees have been shown to enhance water infiltration and soil quality. They also have a disproportionately high value for biodiversity, providing superior habitat to other vegetation in the landscape for many species. Much of this can be attributed to the great age and size of these trees; not only do they provide habitat in their own right, but they can also increase the biodiversity value of other nearby habitats, such as tree plantings and small remnant patches.

Paddock trees also facilitate the movement of wildlife across the landscape. This is important for many reasons: it helps the various nomadic

and migratory birds that occur in our region, it increases the opportunity for wildlife to disperse across the landscape to colonise new habitats, it ensures the flow of genetic material across the landscape and between populations, and at a local level it helps animals gather the resources they need.

Threats to paddock trees

Unfortunately, paddock trees are under siege. They are typically the oldest living structures in the landscape, so natural attrition is inevitable. With a lack of regeneration over the past 100-200 years, there are few medium to large trees to take their place.

The rate of loss of these trees is amplified by a myriad of factors associated with being in a paddock environment, including:

- Spray drift, which weakens paddock trees over time, inviting attack by insects and rot
- Increased nutrient loads from fertilisers and stock camps, making trees more susceptible to insect attack and drought stress
- Ploughing and stock camps, which damage the root zone, again weakening the tree
- Erosion and salinity, which add extra stress.

The accumulated impact of these stresses on trees can be enough to cause their premature death, but it is often a wind storm or fire which is the final nail in the coffin for these already weakened trees.

Preliminary results from our study into the impacts of wildfire show that losses of 20-80% of paddock trees can occur. In addition, deliberate clearing of paddock trees still continues, mostly associated with changing land management practices.

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How landholders can help protect paddock trees

While the prospects of the paddock tree seem grim there are still things we can do to protect existing trees, recruit new trees, and take advantage of the habitat existing trees provide while they are still about. If we can reduce the stresses on paddock trees, it's possible that some could survive another 100-200 years.

Here are some tips:

- Respect these trees, and the contribution they make to a sustainable environment
- Consider them when planning general farm management practices, such as spraying, fertilising and prescribed burning
- When considering environmental works on your property, give paddock trees high priority. Planting around existing paddock trees can give your new plantings a 200 year head start, and the protection from wind, spray drift and insect attack the new plantings provide may also extend the life of the existing tree.

Planting new paddock trees

Recruiting new paddock trees is desirable not only from an environmental perspective but also for production reasons, such as stock shelter. There are a number of ways to do this effectively:

- Change grazing regimes, to allow time for the new tree to germinate, and to recover from grazing. This is particularly successful in pastures that are not heavily modified

- Adopt the principles of whole paddock restoration, or plant a whole paddock with scattered trees, and remove grazing for 2 or more years until the new trees can withstand stock
- Plant individual trees with stock proof guards, or plant clumps of trees protected with temporary fencing.

Increasing the number of paddock trees in a paddock will not only reduce the stress on individual trees, it can also increase the biodiversity values of that paddock. Studies conducted by ANU show that even a small increase in paddock tree density, from 2-4 trees/ha to 5-10 trees/ha, has a significant impact on the diversity of insectivorous bats and birds.

However we must be mindful that the tree we plant today will not fully deliver the same benefits that most existing paddock trees provide - at least not in the next 150 years! I am hopeful that through the innovation and adaptability that is continually shown by our rural communities we can address these issues, and that future generations will inherit agricultural landscapes that contain paddock trees.

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*A great example of planting shrubs and trees around existing paddock trees, near Ladysmith
(Photo by Mason Crane)*

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