

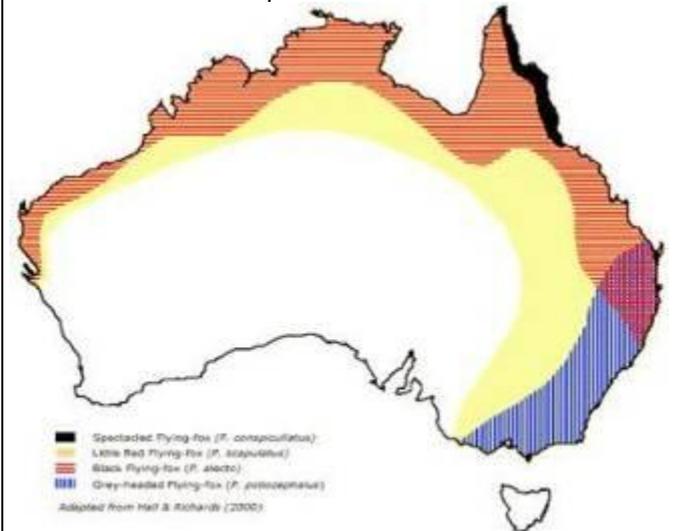
# Bats and Trees

Because of the threat of Hendra virus and the extensive area that flying foxes cover in Australia, horse owners now have to re-evaluate the way that horse properties are set up, the type of tree and the way they are planted.

The following is a guide to avoid bat/horse interactions by using a combination of recommended trees and the way to plant them so you reduce your risks.

**There is no way you will completely eliminate the risks.**

Flying fox distribution map showing the extensive range that they cover in Australia. All species of flying fox in Australia have tested positive for Hendra virus.



## How to Predict Your Risks

- **You Can't!**
- Hendra events have been rare but are increasing in frequency - is that awareness of the disease/are there undetected cases?
- All Hendra events in the same calendar year have been large distances apart.
- All Hendra events have been of a random nature and the properties that have been affected have been different. (Topography/trees or lack of)
- Flying foxes travel large distances to feed – including across your property.
- Do not rely on “seasonal” – the stressors that lead to bats excreting Hendra are not understood, and even if they were we have no way of controlling them. (drought/pregnancy?)

## Signs you are having visitors in the night!

Look for large compressed pieces of skin and flesh on ground under tree. (Spats)

Flying foxes will also pick blossoms, suck out the nectar and spit them out.

Some fruits may be consumed whole, the only evidence may be broken twigs/shoots on trees.

Debris/leaves/broken branches/partially eaten fruit or flowers on or under tree.

Tooth marks on fruit on or under tree.

Fruit may be distributed 100mts from tree.

Below are illustrations of various forms of spats.



## What not to plant.

Do not plant trees that attract bats in or near horse paddocks. Bats are attracted to trees that produce fruit or nectar. These include trees with soft fruits, figs, berries, stone fruits such as peaches, loquats, and mangos. High risk native trees include Moreton Bay Figs, Palms, Lilly Pillies, Eucalypts, Melaluca, Callistemon and Grevilleas.

## What varieties are safer to plant?

Flying foxes feed on soft fruits and flowers which contain a lot of nectar. The trees and plants below do not produce fruit or flowers attractive to flying foxes.

- Conifers and Cypress
- Casuarinas (She Oaks)
- Brachychiton (Kurrajong, Flame Tree, Bottle Tree)
- Bamboo (clumping – also a fodder crop)
- Bougainvillea
- Racehorse Trees (Tipuana), Chinese Rain/Golden Rain Tree (*Koelreuteria formosana*), Jacaranda, Poinciana, Fiddlewood & Olive Trees
- Wattle – the little red flying fox feeds on pollen, but the wattle flowering season though intense is very short. However Wattle is also the favoured food of processionary caterpillars which cause Equine Abortion.

**Flying foxes will roost in any type of tree!  
Poisonous trees, stinging trees, it is more  
the way they are planted that will reduce the  
risk of flying foxes setting up camp.**

### Single Line Plantings for multiple trees.



### Shade Trees

The shade trees below are from top left to bottom right Jacaranda, Tipuana, Poinciana and Kurrajong. They all flower profusely but have a low nectar flower, and are safe to plant in single wide spaced plantings. Never plant multiple shade trees (50mtrs) like these close together or you will encourage a possible roosting site.



### How Not to Plant

The following illustrations are classic cases of dangerous plantings. Bats are very social animals and roost in large colonies. They prefer tall trees with a dense understory of vegetation, and groups of trees with little distance between them. The first 3 pictures show group plantings which would possibly encourage roosting. The bottom right picture shows a yard and shelter with feeders and waterers under cover, but because of the overhanging trees, it is in danger of flying fox visitors. To make it safe the trees overhanging the yard should be cleared and a buffer created between the yards and stables and any flowering or fruiting trees.



### Some paddocks are now hazardous!

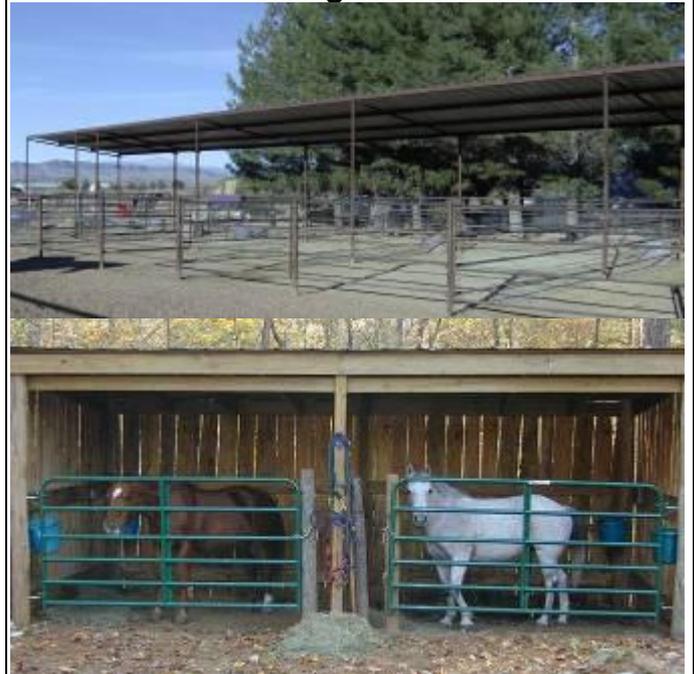


These paddocks with adjoining stables and yards would now be hazardous at certain times of year. The trees in the paddocks mean that horses should be removed during the time that they are fruiting and flowering. Horses should not be allowed access at night, when flying foxes are feeding. The trees over the stables and yards should be removed.



Moreton Bay Fig trees were always considered an ideal shade tree, but they have an extensive fruiting and flowering period and bats love them. These yards and paddocks are now considered unsafe during that time. The water troughs are also uncovered and there is no shelter to put feed bins under. If there was covering over feeders and waterers and no other type of tree that flowered or fruited at a different time of year, the horses could be returned at the end of the cycle.

### Economical Night Time Shelters



Night time shelters do not have to cost a fortune. These simple shelters make good, safe cover against the possible contamination of feed and water in an area with a lot of native flowering trees that the owners don't wish to remove. If the horses are locked away for the night when flying foxes are feeding, their risk of Hendra virus will be greatly reduced. If there are fruiting trees, stabling at night time is not enough, because the virus may stay alive longer cocooned in a piece of fruit or a spat. The horses must be removed completely.

### The Precautions Again!

- Place feed, water and hay containers under cover.
- Bring horses in at night into covered enclosures or night holding paddocks. Remove all nearby and overhanging trees from night time enclosures or holding paddocks.
- Do not allow horses access to paddocks if flying foxes are feeding on the fruiting trees in that paddock. Remove horses from paddocks where flowering trees have resulted in a temporary surge in flying fox numbers. Return the horses after the trees have stopped flowering.
- Do not use feed that might be attractive to flying foxes if they are known to be in the area. Fruit/vegetables (e.g. apples/carrots) or anything sweet (e.g. molasses) may attract flying foxes.
- **Completely remove horses from, and never allow access at any time to areas where flying foxes roost.**

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