Windbreaks & Willows

Positive Effects Of Windbreaks

1. Increase soil and air temperatures.
2. Extend crop growing season for sheltered paddocks.
3. Assist irrigation efficiency and lessen spray drift.
4. Encourages natural insect predators reducing reliance on chemical insect control.
5. Better pollination and fruit set as bees and other pollinating insects are not hampered by strong winds.
6. Improved live stock shelter with shade in the summer and reduced shivering in the winter.
7. Reduced evaporation from farm dams.
8. Helps slow wind erosion in exposed or newly ploughed paddocks.
9. Provide farm timbers and firewood, native tree seed and other tree by-products.
10. Stock and crop protection is increased the taller the windbreak is. This benefit from the trees will be achieved further away from the trees, however, a uniform density (from ground up) is important so wind tunneling doesn't occur under or around the trees. A windbreak that fills up to 40% of the available space is sufficient for improved stock and crop protection. This helps to "filter" the wind rather than block it (like a brick wall would). A total block actually increases wind turbulence on the leeward side of the trees.

Negative Effects Of Windbreaks

1. Occupy space other wise used for crop production.
2. Compete with crop for light, water, and nutrient close to trees.
3. Tree branches falling on fences especially shorting out electric fences.
4. Some windbreaks increase the fire hazard.
5. Windbreaks can harbour rabbits and foxes.

Willows

1. Heavy shade crowds out other native plants reducing animal habitat.
2. Bark too dense to create hiding places for insects.
3. Leaf drop is all at once in the autumn (unlike natives). This huge load of organic matter over short periods clouds and pollutes the water with large amounts of nutrient.
4. The increased organic load encourages massive breeding of micro-organisms to break down the plant material. This population boom uses most of the oxygen in the water making it difficult for crustaceans, fish and other critters to survive. Unfortunately, ferals such as European Carp thrive in these sort of conditions.
5. Willows are shallow rooted using almost exclusively water from the creek and not from the water table. This reduces surface water for creek dwellers and doesn't help reduce the water table (and thus reducing the soil salinity problems).
6. They form thickets and trap creek debris which will divert floods and cause erosion where banks are vulnerable.
7. Crack Willow (the species along most of our Otway waterways) is very brittle and when branches and twigs break off they will take root very easily and spread the willows further down stream.
8. Native trees and shrubs only grow along the creek banks and not IN the water way like willows thus natives are very efficient at holding the banks in times of flood. They also provide habitat for native fish and mammals (platypus).