WINDBREAKS FOR WILDLIFE

by David Clode, Box Hill, Vic.

After many years of 'if it moves, shoot it' and 'if it's green, chop it down', the value of windbreaks for shelter on farms is now generally accepted. Unfortunately, too many windbreaks are still planted with Monterey pine and Monterey cypress. Driving through south-eastern Australia one could be forgiven for expecting to see Mexican gun-slingers having a siesta in the shade of these Californian trees. These trees are also about as useful to wildlife as telephone poles, and they are strongly allelopathic: that is, they produce chemicals which retard the growth of other plants nearby. Both the wildlife and the character of the Australian rural landscape would benefit if native, and preferably mostly indigenous (local), plants were grown instead.

Windbreak plants can be multifunctional too. Red ironbark (*Eucalyptus sideroxylon)* is an attractive tree which is frequented by birds and bees and can provide timber for on-farm use. River she-oak (*Casuarina cunninghamiana*) is another example, a graceful tree which attracts birds, fixes nitrogen and produces firewood. The tree also provides fodder for stock, a particularly useful characteristic during drought years.

There are many advantages to creating wildlife habitats on farms, mainly in the area of pest control. Many insects, such as leaf-hoppers and aphids, also carry and spread plant diseases. In natural woodland, birds consume about half the existing insects. Insectivorous bats are reputed to catch 3000 or more insects a night. Predatory mites can eat up to 20 pest mites a day. Ladybug larvae will consume 30 or more aphids a day. Estimations of the proportions of pest insect species range from one percent to ten percent of all insect species, so ninety percent or more of the insect species killed from spraying may be harmless or beneficial. Of course, after spraying new pests move in and there is little biological control because most of the resident beneficial animals have been wiped out. Given time and the right environment the majority of pests will be controlled by hordes of beneficial insects, spiders and birds. In fact, each pest is often controlled by numerous predators and parasites. Pest control by predators may be slower than by spraying and more damage to the crop may occur. Despite this, it is less costly from economical, environmental and human health points of view and offers long-term control. By planting a windbreak you can carefully select plants that favour the beneficial animals so that they flourish and continue to control the pests.

In order for the insectivorous wasps, mayflies, wattlebirds, honeyeaters and others to catch the pest, they need a constant and permanent source of energy which they get from nectar and pollen. The richest source of nectar and pollen, which these animals are best adapted to harvest, is mainly from flowering native shrubs and trees. They also need the nesting sites these plants provide. Pest insects are also eaten by frogs, which need water and waterplants to thrive. Dragonflies are deadly insect hunters, but you are unlikely to have them unless you have frogs, because dragonfly larvae eat mainly tadpoles. Blue-tongue lizards eat snails but they need logs, rocks or large tussock grasses to live under. Magpies and ibis eat cockchafers and other pasture pests but you can't expect them to help you if they don't have trees to nest in.

There are a number of ways to improve the habitat value of a windbreak. Having different types of plants is essential, so include trees, woody shrubs, herbaceous plants, climbers, groundcovers and grasses. Growing just trees, especially of only one species, is of limited value to wildlife. A variety of shrubs and groundcovers is very important. It has been discovered that many of the lone trees in paddocks suffering from die-back are dying in part because of insect attack. Many of these pests would have been kept in check by birds and insects that lived in the shrubs, but these died or moved away when the understorey was cleared.

Include different habitat types on your land if possible, such as woodland, wetland and grassland. A very effective method of attracting wildlife is to make the most of the 'edge effect'. This is where the edge of one habitat meets the edge of one or more other habitats. This could be the meeting of salt and fresh water in an estuary or the meeting of forest and grassland. A dense habitat of trees and climbers next to a dam, for example, would be a wonderful combination in which many wildlife species would thrive.

Wildlife attracting plants could also be grown on unproductive land, such as dry stony ridges and waterlogged areas. These are useful as wildlife havens. If possible, corridor plantings should be established to connect these areas to windbreaks or existing bush. Trees and shrubs can be grown in the centre of a paddock containing stock in an 'S' or cross shape to give wind protection from all sides. Little used corners of paddocks could be planted to provide a larger patch of bush, with a protected interior, rather than just straight lines of trees in a windbreak. If you can convince neighbours to do the same in adjoining corners you can create a sizeable patch of bush.

Choosing the best plants for wildlife may well come down to local knowledge and your own observation. Indigenous plants will often be the best choice and should be the major part of your windbreak. The plants listed here are generally useful to wildlife and some may be indigenous to your area.

PLANTS FOR WILDLIFE

Understorey Shrubs

Coast wattle (*Acacia longifolia* var *sophorae*) – dense cover to ground level

golden wattle (*Acacia pycnantha*) – one of the best wattles for wildlife

bacon and egg plants (*Pultenaea* species) – attract insects

mountain devil (*Lambertia formosa*) – attracts honeyeaters

bottlebrushes (*Callistemon citrinus, C pallidus, C viminalis*) – attract wattlebirds, insects

white kunzea (*Kunzea ambigua*) – attracts insects

kangaroo apple (*Solanum aviculare*) – fast growing, short-lived, fruit for birds – do not eat fruit!

rice flowers (*Pimelea* species) – provide nectar for insects including butterflies

banksias (*Banksia marginata, B ericifolia, B spinulosa*) –