

Fire Retardant Species

The tendency for vegetation to facilitate fire spread will become more and more important on the East Coast of New Zealand. Wild fires are most likely to break out and spread at a devastating rate when we've had a hot, dry summer – and these are predicted to become more common in the upcoming decades.

Fires catch best in very dry, lightly packed, twiggy material, and these qualities vary between plant species. Fire spreads quickest in plants that:

1. Hold more dead material (dead plant matter is drier than live and requires less energy to ignite)
2. Hold fuel, especially small twigs, evenly spaced along the branches, facilitating fire spread
3. Contain oils and resins—sparks flying ahead of the fire can ignite these substances easily

For example, young gorse isn't rated as highly flammable but older plants are highly flammable because they can be made up of 65% dead material arranged neatly along the branches. And manuka and kanuka burn with high intensity probably due to the essential oils they contain and their small leaves which are continuously spaced along their branches.

The following types of plants are less likely to catch alight and burn in a bushfire:

Plants with high salt content

Plants with fleshy or watery leaves

Plants with thick insulating bark.

Plants which have their lowest branches clear of the ground (therefore less useful for shelter belts!)

Plants with dense crowns.

(Adapted from <http://www.bhu.org.nz/future-farming-centre/information/bulletin/2014-v2/fire-resistant-shelter-belts>)

Low flammability native species include:

Fuchsia excorticata	Kotukutuku
Pseudopanax crassifolius	Horoeka/Lancewood
Pseudopanax arboreus	Five finger
Coprosma robusta	Karamu
Coprosma grandifolia	Raurekau/Kanono
Geniostoma ligustrifolium	Hangehange
Coprosma australis	Raurekau
Coprosma repens	Taupata
Carpodetus serratus	Putaputaweta
Corynocarpus laevigatus	Karaka
Griselinia littoralis	Papauma/Broadleaf
Griselinia lucida	Puka
Macropiper excelsium	Kawakawa/Peppertree



Coprosma repens (Taupata)

Plants with some degree of fire resistance include:

Acacia dealbata, melanoxylon	Acer campestre, negundo	Alnus jorulensis
Atriplex sp.	Agapanthus	Artichoke (Globe)
Brachychiton populneus	Cacti	Carrina grandiflora
Casuarina cristata, cunninghamiana	Ceratonia siliqua (Carob)	Cinnamomum camphora
Echium fastuosum	Ficus carica, macrophylla	Hakea salicifolia, suaveolens
Lagunaria patersonii	Laurus nobilis	Ligustrum sp. (Privet)
Lippia canescens	Ilex aquilifolium	Melia azederach (White cedar)
Morus sp. (Mulberry)	Myoporum sp.	Olea europaea (Olives)
Plantanus sp.	Populneus sp. (Poplar)	Photinia robusta
Quercus sp. (most thick barked oaks)	Tilia vulgaris (Linden)	Rhagodia sp.
Salix sp. & hybrids.	Schinus molle (Peppercorn tree)	Ulmus sp. (Elm)