



GROWING CYPRESSES FOR TIMBER

Species choice and minimising the risk of canker

Information Note 1

Cypresses have long been a favourite alternative to radiata pine for New Zealand's farm foresters, small-scale plantation owners, and some large-scale growers.

IN GENERAL, CYPRESSES:

- Are a versatile species with proven performance both as a timber producer and as a shelter species.
- Produce versatile timber of relatively high value (compared with radiata pine) that is very easy to saw and dry, and has many end uses.
- Grow best on moderately fertile, well-drained, sheltered sites, but with careful species and genotype (seedlot) selection will perform well on a reasonably wide range of sites.
- Produce their best timber on sheltered sites.
- Produce quality timber even as young trees, unlike radiata pine.
- Have a reputation of being prone to canker. However this is chiefly a problem of *C. macrocarpa*, and Leyland cypresses on warmer and exposed sites. Susceptibility to canker depends on site, species, and within any given species, the seedlot. Some seedlots are more resistant to canker than others of the same species. New more canker-resistant planting stock is becoming available.
- Are prone to toppling on fertile sites, especially if poorly drained, and are particularly unstable on water-logged clay soils.
- May cause abortion if foliage is eaten by pregnant cattle. Caution is advised. Cattle raised with access to cypresses tend not to eat the foliage.



18-year old *Cupressus macrocarpa*.

There is an established market for cypress timber based on 'macrocarpa' – a species widely planted throughout New Zealand for many decades, both in plantations and in farm shelter plantings. While other cypress timbers have less market recognition, they are similar to macrocarpa and should command similar prices in the marketplace.

Unfortunately, cypress canker can decimate macrocarpa in many localities, so it is no longer widely recommended. However, canker-resistant planting stock is available. Growers also have a choice of other cypress species, and as long as care is taken matching the right species to site, the risk of canker should be low.

CHOOSING THE BEST CYPRESS SPECIES FOR YOUR SITE AND OBJECTIVES

Common name	Botanical name	Preferred sites	Relative growth rate on suitable sites	Other points of note	General susceptibility to canker
Lusitanica /Mexican cypress	<i>Cupressus lusitanica</i>	Inland only; well-drained soils with reasonable annual rainfall. Best form on sheltered sites.	Fast	A good bet on many sites with careful choice of seedlot and good management. Can be slow to form heartwood.	Low; highest risk on warmer North Island sites.
Macrocarpa	<i>Cupressus macrocarpa</i>	Produces best timber on fertile, sheltered, well-drained sites. Tolerates coastal sites. Now ruled out by many growers due to canker risk.	Fast	Timber is a 'Kiwi' favourite. Good yield of heartwood but pruning is hard work.	High – general advice at present is to avoid planting on all but cooler or coastal sites.
Ovens cypress or 'ovensii'	<i>Cupressus ovensii</i> (<i>Cupressus lusitanica</i> x <i>Chamaecyparis nootkatensis</i>)	Best results on inland sheltered sites with well-drained, fertile soils.	Medium/fast	Excellent form, easy to prune. Timber properties appear promising, experience with timber increasing.	Medium; highest risk on warmer North Island sites.
Bhutan or Himalayan cypress	<i>Cupressus torulosa</i>	Tolerates drier and more exposed sites than all other cypresses (but slower growing).	Medium/slow	Good shelterbelt species on exposed, drier sites. Very fragrant, rich golden timber.	Low.
Leyland cypress	<i>Cupressocyparis leylandii</i> (<i>Cupressus macrocarpa</i> x <i>Chamaecyparis nootkatensis</i> hybrid)	A number of hybrid clones available, Generally more site tolerant than other species. Commonly used as a single-row shelter species e.g. on dairy farms and orchards.	Medium/fast	Hybrids available include Naylor's Blue, Leighton Green, Ferndown, Robinson's Gold. Take advice on selection to suit site and objectives.	High. Susceptibility to canker varies between hybrids. Best planted in cooler areas.
Lawson's cypress	<i>Chamaecyparis lawsoniana</i>	Formerly a popular timber and shelter species, rarely planted now due to lack of improvement. Some canker risk and slowest growing of common species.	Slow	Fragrant both <i>in situ</i> and as sawn timber.	Medium – general advice is to avoid planting except on cool and/or high altitude sites.



17-year old *Cupressus lusitanica*, thinned to final stocking.

CYPRESS CANKER

Cypress canker is caused by one of two closely related fungi which thrive best in conditions where trees are under stress such as in humid or exposed conditions, very dry sites or wet soil.

The fungal spores are spread by rain splash. Damage from canker infection can range from minor stem malformation and dieback of small branches and foliage at the tips of branches, to severe stem malformation and death of infected trees.

If the right tree stock is planted in the right place and managed carefully, then the risk of canker should be low. A good seedlot should have a low incidence of diseased trees.

Trees that are stressed – for example by being planted on an unsuitable site such as too dry, too moist, or too humid – are likely to be more susceptible to canker. Diseased trees are best removed to give healthy trees more space to grow; this removal is usually done during normal thinning operations.

MINIMISING THE RISK OF CANCER - ADVICE FOR PLANTERS

Research to develop canker-resistant macrocarpa and lusitanica has been on-going for some time and farm foresters have developed canker-resistant seedlines. Seed from these 'Farm Forestry Seedlines' is supplied by Proseed (New Zealand's biggest supplier of tree seed). Other potential sources of canker resistant stock are:

- (i) **Scion** – has an improvement programme which aims to produce stock with increased canker resistance, and improved growth and form.
- (ii) **Proseed** – has a macrocarpa breeding programme underway.

Both clonal and seedling stock bred for canker-resistance is becoming available, and further improvements are likely as research continues.

When planning a new planting, it is all-important to assess your site and choose the species and cypress seedlot carefully. Ensure you discuss the seed source on offer with knowledgeable growers, and glean as much information as you can about recent developments in this area. The NZFFA Cypress Development Group is the best source of information, so we recommend you join this group.

Photos: John Milne.



7-year old Leyland cypress (Ferndown hybrid).



8-year old Ovens cypress, showing consistent good form.



14-year old Lawsons cypress, slow-growing and canker-prone on wrong site.

MORE INFORMATION

The best source of information and expertise about growing cypresses is the NZFFA Cypress Development Group. We recommend you join this group.

This information note is one of a series produced by the NZ Farm Forestry Association with funding from the MPI Sustainable Farming Fund. A series of videos is also available.

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