

Camphor laurel (*Cinnamomum camphora*)

Camphor laurel is a highly invasive evergreen tree that has a tendency to form single species communities and exclude most other desirable native vegetation

Profile

Impact

Camphor laurel has the ability to adapt to the disturbed environment, it has prolific seed production and rapid growth rate as well as a lack of serious predators or diseases, it also has many specific attributes which enhance its weed status.

- It has a tendency to form single species communities and exclude most other tree species, including desirable native vegetation.
- It has a competitive advantage over native vegetation because it establishes easily.
- Birds and other fauna readily eat the fruit and disperse the seeds.
- It has a very dense, shallow root system which, when accompanied by the shading provided by the canopy, suppresses the regeneration of native seedlings.
- It can destabilise stream banks due to undercutting by the shallow root system and the general lack of ground cover species around the trees to hold the soil in place.
- Mature camphor laurel trees are large and therefore difficult and expensive to remove.
- Camphor laurel trees are long-lived with some trees being over 100 years old and reports of some up to 500 years old in their native habitat.
- Camphor laurel trees regenerate easily after lopping.
- Invasion of agricultural lands by camphor laurel can cause significant impacts on productivity and the costs of control can reduce the viability of some agricultural pursuits.

On the north and mid north coast, camphor laurel invades large areas of land and inhibits potential land use in the same way as lantana, groundsel bush, crofton weed and privet. It is especially troublesome on sloping, rocky land not readily accessible to machinery or grazing animals, and on better land not intensively utilised. The contraction of dairying and banana farming since the 1960s has resulted in large areas becoming infested with camphor laurel.

Toxicity

Camphor laurel is mildly toxic to humans, and mild symptoms may occur if large quantities are eaten. All parts of the plant are poisonous and can cause nausea, vomiting and respiratory distress. Allergic skin reactions can also occur.

Spread

Camphor laurel seeds germinate more readily after ingestion by birds. It is thought that the fruit contains a germination inhibitor to delay germination until seeds are separated from the fruit. Viability is usually at least 70 per cent in the first year, decreasing rapidly in the second year. Some seeds remain viable for 3 years. Germination extends over a period of 4 to 20 weeks. This adaptation ensures the spread of viable seeds over time, leading to favourable weather conditions for germination.

Seedlings do not grow quickly until the root system becomes established, after about 1 year. In closed stands of camphor laurel, seedlings grow slowly, along with some native species, until the stand is disturbed, allowing more light to enter and seedlings to grow more rapidly.

Camphor laurel starts flowering after approximately seven years, depending on location. Flowering occurs in spring and fruits mature in autumn.

The ripe fruit is ingested and spread by a number of species of birds, including pied currawongs, flock pigeons, magpies, figbirds, olive-backed orioles, blue-faced honeyeaters and black-faced cuckoo shrikes. As a result trees readily establish along fencelines and under powerlines.

Description

Camphor laurel is an evergreen tree which grows up to 20 m in height. It has a large, spreading canopy and a short, stout bole or trunk up to 1.5 m in diameter.

The bark is greyish brown and has a rough texture. The leaves are alternate, 5–10 cm long and 2.5–5 cm wide and are a glossy green.

Flowers are minute, white and borne on panicles or heads near the ends of branches. They have a distinctive odour and attract large numbers of small flies.

The fruit is a round berry 8 mm in diameter. The berries are green when immature and ripen to black. They contain a single seed about 5 mm in diameter.

In dense stands, second generation trees are more upright with long, slender boles and small canopies. Young trees tend to form multiple stems after fire or other injury.

Camphor laurel is easily identified by the pungent camphor odour arising from crushed leaves or exposed wood. In its native habitat there are three distinct types based on the major oil components of either camphor, cineole or linalool. The camphor form is most common in Australia.

Habitat

Camphor laurel grows in areas of high rainfall, averaging 1000 mm or higher. Camphor laurel can grow on a wide range of soil types but especially prefers fertile flood plains and soils derived from basalt.

Camphor laurel invades habitats where forests have been cleared or disturbed, usually for pasture or cultivation. Areas that remain inhabited by rainforest are not invaded, except along tracks cleared for logging.

Camphor laurels are spreading further up catchments and hillsides, and westward into drier areas with poorer soils.

Acknowledgements

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References

National Herbarium of NSW. PlantNET – FloraOnline. <http://plantnet.rbgsyd.nsw.gov.au>. Accessed 27 March 2008

Control

Landowners are encouraged to control isolated and scattered camphor laurel trees, particularly if they are small, as soon as possible. Local councils have active control programs for roadsides and reserves. These programs focus on working from the cleaner, lightly infested areas to the more heavily infested 'core areas'. In core areas, gradual, long-term management programs are being put in place.

A number of techniques are available to control camphor laurel. The technique used will depend on the situation, landscape, number of trees to control and resources available. It is important to plan your control program and take a long-term approach including follow-up treatments, control of other weed species, and planting of replacement species.

Management should aim to increase competition, which will prevent invasion by camphor laurel.

Pasture management

Good pasture management can prevent camphor laurel invasion. Overstocking and overgrazing will lead to pasture degradation and allow the invasion of weeds.

Forestry and horticulture

Establishing intensive land use such as agroforestry or horticulture can prevent the spread of camphor laurel trees, especially on poorer or steeply sloping land.

Mechanical removal

Smaller trees (up to 10 cm in diameter) can be lopped and the stumps treated with chemical.

Professional tree arborists can cut down bigger mature camphor laurel trees, mulch the timber and grind the stump out of the ground. This is a particularly good technique in urban areas, roadsides and backyards where a tree needs to be totally removed.

Bulldozing can be done without prior chemical treatment. Bulldozing removes the entire tree but is an expensive option and the resulting disturbance of soil can lead to the rapid re-establishment of camphor laurel and other weeds.

Soil erosion can occur on cleared slopes unless a desirable ground cover is established quickly.

Landholders planning to undertake a mechanical control program involving significant soil disturbance should seek advice from the Local Land Services and comply with any relevant environmental guidelines and legislation.

Replacement of removed trees

When planning a good control program, replacement with native species or competitive pastures is vital for long-term weed control. Native rainforest and other species will often germinate underneath camphor laurels but the intense competition by mature camphor laurels dramatically reduces the ability of those seedlings to grow to maturity. When camphor laurels are controlled in stages these native species are able to grow and replace the camphor laurels.

Camphor laurels that form wildlife corridors need to be controlled gradually and replaced with alternative food sources wherever possible.

It is always better to use local natives as replacement trees that will encourage the return of native flora and fauna. The Camphor Laurel Kit produced by the North Coast Weeds Advisory Committee gives a comprehensive list and guide to replacement species. It is available from your local council or www.northcoastweeds.org.au

Value adding

Camphor laurel can be a valuable resource as a commercial timber. Every opportunity should be taken to offset the costs of control by using suitable sized trees which meet specifications for commercial harvest. The harvesting, milling and value adding of camphor laurel in northern NSW is estimated to be worth more than \$1 million in annual turnover. Camphor laurel timber is used for a range of products and furniture including tables, kitchen benches, railings, bookcases, chairs, stairs, carvings, sculptures and various items that can be turned on a lathe.

Camphor laurel is also being trialled as a potential fuel biomass in a north coast cogeneration project to produce electricity. Proposals are advanced to use woodchip for fuel to generate electricity at the Condong and Broadwater Sugar Mill cogeneration plants. This will involve the harvest of camphor laurel on a significant scale to supply this project.

Chemical control

Chemical control is an effective way of controlling existing infestations. Herbicides can control trees without the need to disturb soil or other vegetation.

In areas to be cleared, prior herbicide control allows easy removal of the dead stumps and hastens the revegetation process.

Effective control of camphor laurel can be achieved by using either the cut stump, stem injection, basal bark or foliar spray application techniques. The method used depends on the site situation, tree size, access and personal preferences.