

LOCAL NAMES

English (pindan wattle)

BOTANIC DESCRIPTION

Acacia pachycarpa is a small, single-stemmed tree or shrub with several stems, 3-4 (6 max.) m tall; pendulous branches and, on more favourable sites, a large crown; bark on the trunk is furrowed, hard and dark grey, becoming smooth and light grey on upper branches.

Phyllodes are elliptical to linear, long and narrow, 15-23 cm in length, 6-20 mm wide, lax, more or less curved, with 1-5 more prominent longitudinal nerves.

Creamy white flowers in spikes 3-3.5 cm long on a short peduncle, 4-20 mm long.

Pods are swollen when fresh, narrow oblong, 7-15 cm long, 1-2 cm wide, woody, yellowish-brown, more or less shiny, straight or twisted, convex over the seeds but not strongly constricted between them, often breaking between the seeds; seeds are transverse in the pod, smooth, shiny, somewhat variable in colour from pale brown to black, 6-9 mm long, 5-7 mm wide, 3-4 mm thick, with a small, white, terminal aril.

The generic name 'acacia' comes from the Greek word 'akis', meaning a point or a barb. The specific name is from the Greek words 'pachys', meaning thick or stout, and 'carpus', meaning from fruit, referring to the appearance of the pod. *A. pachycarpa* is related to *A. cuthbertsonii*; the latter has hairy branchlets, smaller phyllodes and flower heads and a gland on the phyllode margin up to 3 mm from the base.

BIOLOGY

A. pachycarpa is hermaphroditic. Flowering is variable, and in Australia mature pods have been observed from March to October.

ECOLOGY

A. pachycarpa occurs in hot, arid climate zones. It is usually found as single shrub communities on heavier soils along drainage lines. It is confined to the Western Plateau physiographic division in Australia, where it is found in the plains along drainage lines, in clay depressions or on clayey flats. The tree is frost intolerant, and this prevents its occurrence in cold, arid areas. In the Great Sandy Desert in Australia, it forms thickets in or overtopping hummock grasses, and with increasing rainfall, it becomes taller and denser, attaining heights of 8 m in the wettest climates and 3 m in the driest climates. It is also found on the coast of Australia. Although reportedly tolerant of some degree of salt in the soil in its natural habitat, it ranked amongst the less tolerant species of a range of acacias screened for salt tolerance in a glasshouse trial. It has been recorded growing with *Acacia stenophylla*, *A. victoriae*, *Atalya hemiglauca*, *Eremophila bignoniiflora* and *Senna oligophylla*. In the wetter parts of the range, it is associated with eucalypts, especially *E. dichromopholia*, *E. setosa* and *E. victrix*.

BIOPHYSICAL LIMITS

Altitude: 100-500 m, Mean annual temperature: 12-41 deg. C, Mean annual rainfall: 20-350 mm

Soil type: Grows on alluvial and deep red siliceous sands, alluvial loams and heavy black and red cracking clays.

DOCUMENTED SPECIES DISTRIBUTION

Native: Australia

Exotic:



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS

Food: The seeds are nutritious, containing 22% crude protein, 8% fat and 57% carbohydrate. The Aborigines of Australia reportedly used them as a staple food.

Fodder: In its natural habitat, *A. pachycarpa* is heavily grazed by animals and has potential as a good fodder species.

Fuel: The tree has not been used for fuel but has the potential to produce small-sized firewood.

SERVICES

Shade or shelter: *A. pachycarpa* can serve as a windbreak.

Nitrogen fixing: *A. pachycarpa* is nodulating and is able to fix nitrogen.

Ornamental: The pendulous habit of *A. pachycarpa* makes it a potential ornamental plant for arid areas, but its phyllodes, branches and flowers produce an unpleasant odour, so that planting it close to human habitation is undesirable.

TREE MANAGEMENT

Plant communities where *A. pachycarpa* occurs are regularly burned so that the composition of the stands varies from year to year. Burning does not kill the *Eucalyptus* species but almost completely removes acacias that regenerate from seed.

GERMPLASM MANAGEMENT

There are about 5000-7000 viable seeds/kg.

FURTHER READING

Beadle NCW. 1981. The vegetation of Australia. Cambridge University Press.

Doran CJ, Turnbull JW (eds.). 1997. Australian trees and shrubs: species for land rehabilitation and farm planting in the tropics. ACIAR monograph No. 24, 384 p.

Turnbull JW. 1986. Multipurpose Australian trees and shrubs: lesser-known species for fuelwood and agroforestry. ACIAR Monograph No. 1.

SUGGESTED CITATION

Orwa C, Mutua A, Kindt R, Jamnadass R, Simons A. 2009. Agroforestry Database: a tree reference and selection guide version 4.0 (<http://www.worldagroforestry.org/af/treedb/>)