

PRAIRIE ACACIA

Acacia

Acacia angustissima

Leguminaceae

ECHO® PLANT INFORMATION SHEET

Description

Grown throughout Central and South America as a pioneer species for rebuilding degraded soils. *Acacia angustissima* grows as a thornless shrub or small tree to an average of 2-7 meters tall with a single short trunk. It is a legume, capable of fixing nitrogen in nodules on its roots if the appropriate strain of Rhizobium bacteria is present in the soil. It is often found in tropical deciduous or semi-deciduous forests. It tolerates cold climates (occasional temperatures below freezing) and free-draining acid soils. It also withstands periods of drought, possibly due to its substantial taproot, retaining its green foliage in the long dry season. In its natural range *A. angustissima* is found on hillsides, rock slopes, summits, and in grassland with other shrubs. *A. angustissima* is a relatively fast growing tree, sometimes reaching a 5 m height and about 6 cm diameter after 2.5 years. *A. angustissima* grows rapidly and responds well to regular copicing. However, it produces weak branches that break off in moderate winds. This ability to grow quickly has resulted in *A. angustissima* becoming weedy and forming thickets, especially along roadsides and in sandy soil in pastures in its native range.

Uses

In alley cropping, the cut foliage can be used as a mulch (green manure), adding some nitrogen to the soil as the leaves decompose. Prairie Acacia can be used to provide some wind protection and shade. Rapid growth of this plant from seed as well as re-sprouting after being cut to the ground makes this an important crop for cattle grazing. *A. angustissima* has been found to produce significantly more leaves than other shrub legumes, notably *Leucaena* spp., *Calliandra calothyrsus*, *Gliricidia sepium*, *Cajanus cajan*, and *Sesbania* spp. However, the high tannin content and low palatability means it is of limited nutritional value to livestock. *A. angustissima* cuttings contain high levels of N, P and K, but due to a high tannin content (6% DM), the protein is less accessible to the livestock. Tests have shown that *A. angustissima* leaves degrade poorly in the rumen of cows (48% after 48 hours of incubation).

Common Names

- French
 - acacia

Cultivation

- Altitude: 0-2600 m (0-8500 ft)
- Temperature: 5°-30° C (40°-86° F)
- Rainfall: 900-2870 mm (35-112 in)
- Soil: Can tolerate drained acidic, infertile soils; very drought hardy

Harvesting and Seed Production

A. angustissima seems to fare better when grown from transplanted seedlings than from direct seeding. If it is to be directly seeded, then it is important not to sow too deeply. The seeds should be sown on the surface of cultivated soil and covered with a layer of soil equal to the width of the seed. The best pre-treatment results from 12 hours soaking in cold water before sowing. The standard hot-water treatment (a two-minute soak in hot water followed by 12 hours in cold water) results in inferior germination. The seed has the ability to stay dormant for up to one year and it is even known to survive fires. The pods are initially green, turning coffee-brown as they ripen.

Pests and Diseases

Because of its rapid growth, Prairie Acacia could have the potential of becoming an invasive weed. It is sensitive to root-knot nematodes.

References

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