Caesalpinia spinosa

(Mol.) Ktz.

Fabaceae - Caesalpinioideae

LOCAL NAMES
English (wattle,chestnut); Spanish (tara,quebracho,huarango,guaranga)

BOTANIC DESCRIPTION
Caesalpinia spinosa is a shrub or small tree up to 5 m high with reflexed prickles along its spreading spinose grey-barked densely leafy branches.

Leaves bipinnate, smooth or with sparse, short prickles; pinnae 2-3 pairs, often 10 mm long, with about 8 pairs of subsessile, firm, reticulate-veined, oblong-elliptic, glabrous leaflets, oblique at base, rounded at apex, about 2.5 cm long, 1 cm broad.

Flowers reddish-yellow, in narrow racemes 8-12 cm long; pedicels puberulent, 5 mm long, auriculate below the short calyx tube; larger calyx segments serrulate, about 6 mm long, the petals less than twice as long, about as long as the stamens.

Pods red, flat, 10 cm long, 2.5 cm broad, 4-7 seeded.

Seeds large, round and black at maturity.

The generic name is after A. Caesalpini, 1519-1603, Italian physician and botanist.
The specific epithet refers to the fact that it bears prickles.

ECOLOGY
In South America C. spinosa grows in the forests and semi desert areas of the Interandine region, along the higher cooler inner slopes of both Cordilleras of Ecuador. Similar localities in North Africa and elsewhere are preferred ranging from warm temperate through tropical very dry to tropical wet forest zones.

BIOPHYSICAL LIMITS
Mean annual temperature: 14-28 deg C
Mean annual rainfall: 660-1 730 mm
Soil type: Tara prefers soils with pH 6.8-7.5.

DOCUMENTED SPECIES DISTRIBUTION

Native: Bolivia, Chile, Colombia, Cuba, Ecuador, Peru, Venezuela
Exotic: Ethiopia, Kenya, Morocco

Native range

Exotic range

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
Fodder: Seed germ (38 % C. spinosa seed weight) may be used as a source of protein in animal feeds once separated from the hull and endosperm.

Timber: The wood is durable.

Gum or resin: Seed endosperm (22 % seed weight) yields gum of commercial value. It is a white to yellowish powder and consists chiefly of galactomannan-type polysaccharides. C. spinosa gum is used as a thickening agent and stabilizer in the food industry.

Tannin or dyestuff: C. spinosa pods contain 50% tannin, about twice as much as sumac (Rhus). The high content of hydrolysable tan has made it interesting for the extraction of gallic acid and ink manufacturing. The tannin is used on leather.

Poison: The pods have high tannin content and may be lethal if consumed in large quantities by animals.

Medicine: The powder within pods is used as eyewash.

SERVICES
Boundary or barrier or support: C. spinosa is sometimes grown as a live fence in Peru.

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TREE MANAGEMENT
Wild trees are subjected to simple pruning operations as most seed is harvested from them.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox. Seed should be pretreated to break the hard seed coat.

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FURTHER READNG

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Wrann HJ and Arriagada BM. 1988. Experimental plantations of tannin-producing species in the semi-arid zone of Chile. Ciencia e Investigacion Forestal. 3: 51-66.

SUGGESTED CITATION

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