

LOCAL NAMES

Igbo (nyie avu); Swahili (nongo); Yoruba (ayin rela)

BOTANIC DESCRIPTION

Albizia zygia is a deciduous tree 9-30 m tall with a spreading crown and a graceful architectural form. Bole tall and clear, 240 cm in diameter. Bark grey and smooth. Young branchlets densely to very sparsely clothed with minute crisped puberulence, usually soon disappearing but sometimes persistent.

Leaves pinnate, pinnae in 2-3 pairs and broadening towards the apex, obliquely rhombic or obovate with the distal pair largest, apex obtuse, 29-72 by 16-43 mm, leaves are glabrous or nearly so.

Flowers subsessile; pedicels and calyx puberulous, white or pink; staminal tube exerted for 10-18 mm beyond corolla.

Fruit pod oblong, flat or somewhat transversely plicate, reddish-brown in colour, 10-18 cm by 2-4 cm glabrous or nearly so.

The seeds of *A. zygia* are smaller (7.5-10 mm long and 6.5 to 8.5 mm wide) and flatter than either of the other *Albizia*, but have the characteristic round shape, with a slightly swollen center.

The genus was named after Filippo del Albizzi, a Florentine nobleman who in 1749 introduced *A. julibrissin* into cultivation.

BIOLOGY

A hermaphroditic species flowering in January, February, March, August, and September. Fruits ripen in January, February, March, April, November, and December. This tree hybridizes with *A. gummifera*.

ECOLOGY

A light demanding pioneer species, it is rarely found in closed canopy forests dominated by *Chlorophora regia* and *Ficus macroserma*. Common in lowland coastal rain-forests, riverine forest and in woodland. This tree is indigenous to tropical Africa and has a wide distribution, from Senegal in west Africa to eastern Africa.

BIOPHYSICAL LIMITS

Altitude: 915 -1 400 m

Mean annual temperature: 26 deg C

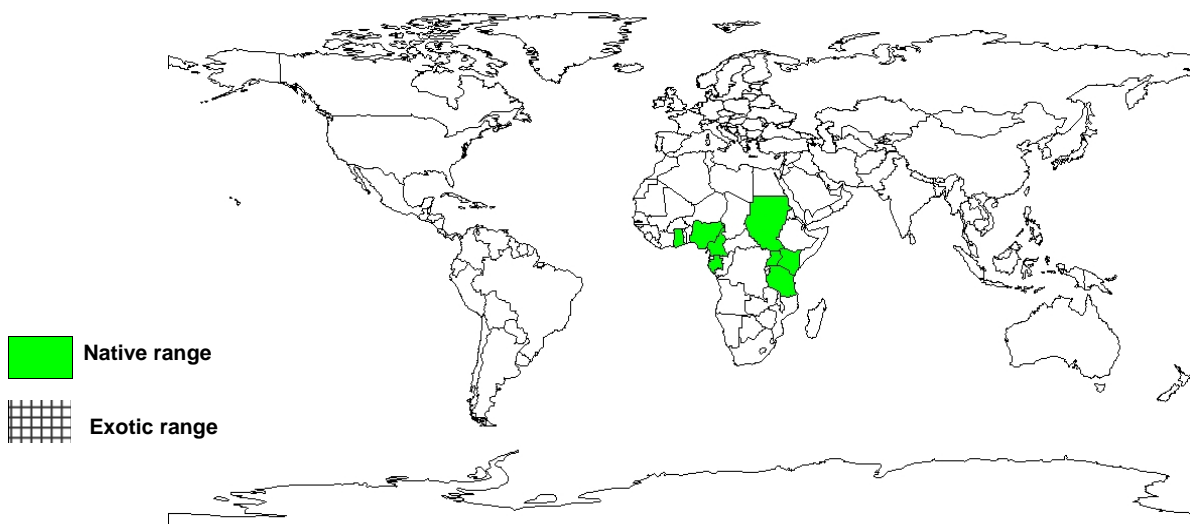
Mean annual rainfall: 2 732 mm

Soil type: Prefers well drained loamy or clayey soils. It has been found to be tolerant to soil acidity and water stress.

DOCUMENTED SPECIES DISTRIBUTION

Native: Cameroon, Democratic Republic of Congo, Gabon, Ghana, Kenya, Nigeria, Sudan, Tanzania, Uganda

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 young leaves are cooked and consumed as a vegetable, especially in soups. Analysis of the seeds reveals a low crude protein content. Amino acids such as lysine, sulfur amino acids and threonine are limiting, indicating the limited nutritional value of *A. zygia* seeds.

Fodder: The shoots and leaf are eaten by livestock.

Apiculture: The nectariferous flowers attract bees.

Fuel: Provides considerable amounts of charcoal in Ghana and fuelwood in other localities.

Timber: Produces a class three timber with the trade name "Okuro", this is a quality timber with a pale brown heartwood fairly easy to work, durable but not termite proof. Used in construction, making handles of farm implements, household utensils and furniture. *A. zygia* is a preferred species for wood carving in the Democratic Republic of Congo.

Gum or resin: A viscous gum from *A. zygia* can be used as a stabilizer in ice-cream.

Tannin or dyestuff: Bark has tannins.

Medicine: Molluscicidal activity shown by leaf extracts of *A. zygia*.

SERVICES

Erosion control: With a fairly deep rooting system *A. zygia* has great potential to protect vulnerable soils.

Shade or shelter: Provides shade for cacao trees in plantations.

Reclamation: Has a high potential for ameliorating degraded cocoa soils. The species also exhibits characteristics of drought avoidance.

Nitrogen fixing: *A. zygia* is confirmed as nodulating, Rhizobium-type root nodules were found on roots of mature specimens of *A. zygia*. Greenhouse and field experiments indicate the tree is also capable of symbiotic nitrogen fixation with Bradyrhizobium and forming vesicular arbuscular mycorrhiza.

Soil improver: Provides mulch leaf litter and improves the pH in acidic soils.

Ornamental: As an ornamental this showy tree can grace avenues and recreation sites.

Boundary or barrier or support: Though termite vulnerable, the wood can be used for temporary structures or fencing.

Intercropping: As an agroforestry tree, it is still untested but looks promising. In Ghana the tree is one of the most favoured cacao shade trees.

Other services

Provides shelter, shade and serves as a windbreak.

TREE MANAGEMENT

A rapidly growing tree, a two year old tree can be 3 m tall. Has little management needs, however pollarding and coppicing are recommended for form improvement and propagation.

GERMPLASM MANAGEMENT

A pretreatment of c. 100 seeds with 30 ml 98% sulphuric acid for five minutes followed by thorough washing in free flowing tap water significantly improves germination by up to (86%).

PESTS AND DISEASES

Members of one of the insect genus Entedon eat *A. zygia* seeds. Some seedborne pathogenic fungi are reported in this species.

FURTHER READNG

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SUGGESTED CITATION

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