Irvingia gabonensis

(Aubrey-Lecomte ex O. Rorke) Baill.

Irvingiaceae

dika nut

LOCAL NAMES
English (wild mango,native mango,duiker nut,bush mango,bread tree,African mango tree); French (manguier sauvage,bobo); Hausa (goron,biri); Igbo (obono); Trade name (dika nut); Yoruba (oro)

BOTANIC DESCRIPTION
Irvingia gabonensis grows to a height of 15-40 m, bole slightly buttressed. It has a dense, compact crown, branchlets ending in a narrow, curved, stipular sheath covering the leaf bud. Bark greyish, smooth or very slightly scaly; slash yellowish-brown to light yellow, brittle.

Leaves 5-15 x 2.5-6 cm, elliptic to slightly obovate, 1 margin often a little more rounded than the other, acute or shortly acuminate, cuneate or slightly rounded at the base; leathery dark green and glossy above; with 5-10 pairs of irregular lateral veins, the lower ones running out nearly to the margin.

Flowers yellowish to greenish-white, in slender, clustered racemes or small panicles above the leaves and about as long as them, or on the branchlets and younger branchlets; individual flower stalks slender, about 6 mm long, petals bent right back and soon falling off, disc bright yellow.

Fruits yellowish when ripe, broadly ellipsoid and variable in size between varieties, 5-7.5 cm with a yellow, fibrous pulp surrounding a large seed.

The genus name commemorates E.G. Irving, 1816-1855, a Scots botanist.

BIOLOGY
I. gabonensis is hermaphroditic, with flowers being pollinated by Coleoptera, Diptera, Hymenoptera and Lepidoptera. In Nigeria, flowering is from March to June and there are 2 fruiting seasons, from April to July and September to October. Seed dispersal is by specialized vertebrates, such as elephants.

Fruit on three-year-old trees in Onne, Nigeria (Anthony Simons)

Tree in degraded forest near Port Harcourt, Nigeria. (Anthony Simons)

Kernels (centre) from fruits in Cameroon (Zac Tchoundjeu)

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ECOLOGY
I. gabonensis occurs in the wild in lowland forest; 2-3 trees occur together and in some areas it is reported to be gregarious. The dika nut tree is a species of dense moist forest.

BIOPHYSICAL LIMITS
Altitude: 200-500 m, Mean annual temperature: 25-32 deg. C, Mean annual rainfall: 1500-3000 mm

Soil type: Does not have any particular soil preference; grows well in well-drained, acidic soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Cameroon, Central African Republic, Congo, Cote d'Ivoire, Democratic Republic of Congo, Equatorial Guinea, Gabon, Ghana, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Sudan, Uganda

Exotic: Benin, Sao Tome et Principe

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.

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PRODUCTS
Food: Fruit pulp is palatable and can be used for a fruit drink and for jam production. The kernel can be processed into flour by extraction, drying and grinding. The pounded seed is added to meat and various vegetable dishes as a sauce. Margarine and cooking oil can be obtained from the kernels.

Fodder: Seeds are used as cattle cake in Ghana.

Timber: Wood pale brown, very hard and fine grained, not easy to cut, which limits its usefulness. Its weight precludes it from all but the most rugged construction work, e.g. for railway ties. Useful for making canoes and pestles for yam mortars; also suitable for boards, planking, ship decking and paving blocks.

Tannin or dyestuff: Reported to contain tannin in both bark and roots.

Lipids: Kernels contain oil used for making soaps, cosmetics and pharmaceuticals.

Wax: Contains waxes useful as an adjunct in making medicinal tablets.

Medicine: Relieves diarrhoea and dysentery. Used internally as a purgative, for gastrointestinal and liver conditions, for sterility, hernias and urethral discharge, and is considered to be a powerful aphrodisiac.

Other products: In its native range, the seed is a valuable source of cash income. In southern Cameroon, the seeds could be described as the most important, legal, non-timber forest product from the area.

SERVICES
Erosion control: Planted alongside other species to check soil erosion.

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TREE MANAGEMENT
I. gabonensis responds well to pruning. Maintenance operations such as watering and weeding are required in the nursery.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox.

PESTS AND DISEASES
Unripe fruits are attacked by rodents, including squirrels, which gnaw through the mesocarp and the pyrene to reach the seed. Red forest pigs split the pyrenes open and eat the seeds.

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SUGGESTED CITATION

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