Annona senegalensis

Pers.

Annonaceae

LOCAL NAMES
Afrikaans (wildesuikerappel); Amharic (giishta,yebere lib); Arabic (gishta,gishta gaba); English (wild soursop,wild custard apple); French (pomme cannelle du senegal,annone); Mandinka (sinkuongo,jumbukungo); Shona (muroro); Swahili (mchekwa,mkonokono,mtomoko-mwitu,mutopetope,mwitu,mtomoko)

BOTANIC DESCRIPTION
Annona senegalensis is a shrub or small tree 2-6 m tall but may reach 11 m under favourable conditions; bark smooth to roughish, silvery grey or grey-brown, with leaf scars and roughly circular flakes exposing paler patches of under bark. Young branches with dense, brown, yellow or grey hairs that are lost later.

Leaves alternate, simple, oblong, ovate or elliptic, 6-18.5 x 2.5-11.5 cm, green to bluish-green, almost without hairs on top, but often with brownish hairs on underside, net veining green to reddish on both surfaces; apex rounded or slightly notched; base square to slightly lobed; margin entire; petiole short, 0.5-2.5 cm, thickset.

Flowers up to 3 cm in diameter, on stalks 2 cm long, solitary or in groups of 2-4, arising above the leaf axils; 6 fleshy cream to yellow petals in 2 whorls, greenish outside, creamy or crimson, 0.8-1.5 x 0.9-1.1 cm, glabrous or minutely papillose within; inner whorl of the petals curving over the stamens and ovary; sepals ovate, 3 in number, free, smaller than the petals, 3-4 x 4-5 mm; stamens 1.7-2.5 mm long.

Fruit formed from many fused carpels, fleshy, lumpy, egg shaped, 2.5-5 x 2.5-4 cm, ovoid or globose; unripe fruit green, turning yellow to orange on ripening; stalk 1.5-5 cm long; seeds numerous, cylindrical, oblong, orange-brown.

The genus name, ‘Annona’, is from the Latin word ‘anon’, meaning ‘yearly produce’, referring to the production habits of fruits of the various species in this genus. The specific name means ‘of Senegal’, which is where the type specimen was collected.

BIOLOGY
The flowers of Annona genus have both male and female parts, but the stigmas are generally not receptive at the time the pollen is shed. Beetles of several species are important in carrying out natural pollination. But complete pollination seldom occurs, explaining the frequency of misshapened fruits. Hand pollination may improve both yield and quality of the fruit. In Sudan, trees flower and fruit in April to May.

Annona senegalensis leaves (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

Annona senegalensis flower (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

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ECOLOGY
Wild fruit trees of this species are found in semi-arid to subhumid all over regions Africa. The species occurs along riverbanks, fallow land, swamp forests and at the coast. Commonly grows as a single plant in the understorey of savannah woodlands.

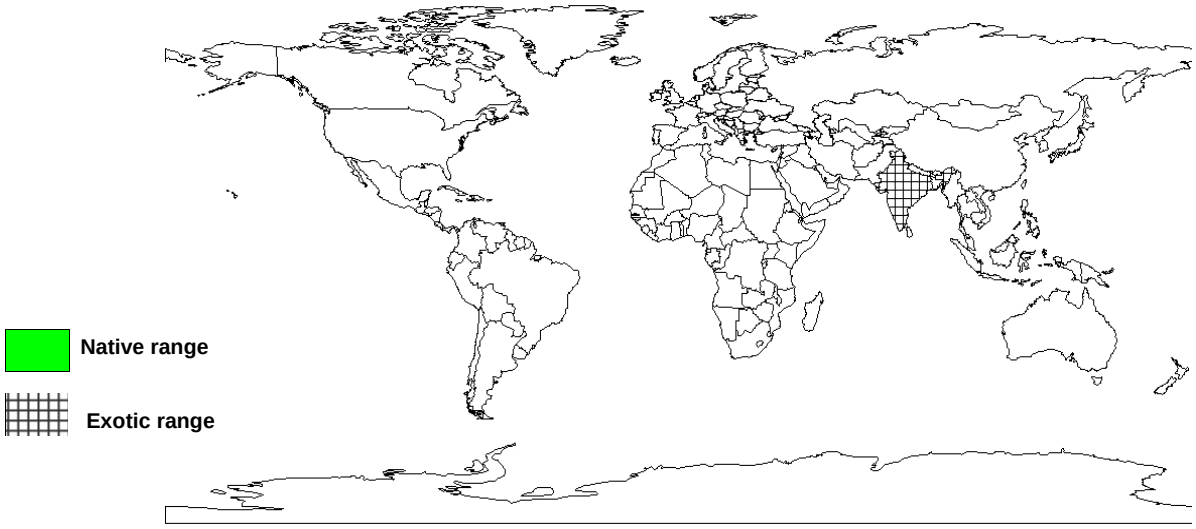
BIOPHYSICAL LIMITS
Altitude: 0-2400 m, Mean annual temperature: 17-30 deg. C, Mean annual rainfall: 700-2500 mm.

Soil type: Although A. senegalensis grows on various soil types, it does well on coral rocks dominated by sandy loam soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Botswana, Cameroon, Congo, Cote d'Ivoire, Democratic Republic of Congo, Ethiopia, Gambia, Guinea, Kenya, Lesotho, Mali, Mozambique, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Uganda

Exotic: India



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 leaves are sometimes used as vegetables, while the edible white pulp of the ripe fruit has a pleasant, pineapple-like taste. Flowers serve as a spice for various meals.

Fodder: Livestock browse the leaves.

Fibre: Fibre from young sucker shoots is used in binding.

Timber: Wood is soft and white or light brown in colour; it is used for poles and tool handles.

Tannin or dyestuff: A yellow or brown dye is obtained from the bark.

Essential oil: The major constituents are car-3-ene in the fruit and linalool in the leaves.

Poison: An effective insecticide is obtained from the bark.

Medicine: The bark is used for treating guinea worms and other worms, diarrhoea, gastroenteritis, snakebite, toothache and respiratory infections. Gum from the bark is used in sealing cuts and wounds. The leaves are used for treating pneumonia and as a tonic to promote general well being. The roots are used for stomach-ache, venereal diseases, chest colds and dizziness. Various plant parts are combined for treating dermatological diseases and ophthalmic disorders.

Other products: Ash from the wood is added to chewing or snuff tobacco and also is a solvent in soap production. Leaves are sometimes used in filling mattresses and pillows, and in Sudan a perfume is made from boiled leaves. In South Africa, roots are said to cure madness, and in Mozambique, they are fed to small children to induce them to forget the breast and thus hasten weaning. It has also been claimed that leaves picked on a Thursday morning and thrown over the right shoulder bring good luck.

TREE MANAGEMENT
A. senegalensis should be protected from fire and browsing. The planting site should be cleared, and the site should be weeded, as the young plants are not hardy enough to compete with weeds. A light shade should also be provided. Fruit cracking is common.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox. Seeds are susceptible to insect damage and lose viability within 6 months. However, viability can be maintained for more than 2 years in air-dry storage at 5 deg. C.

PESTS AND DISEASES
The primary disease that affects the genus is anthracnose, caused by Colletotrichum gloesporioides. It induces small, light green spots on leaves and dark spots on flowers, causing them to drop prematurely and leading to mummification of the fruit. It is controlled by spraying with fermate, phygon and fungicides.

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SUGGESTED CITATION

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