Bush mango

Ando'o – Oba – Meba

Family: Irvingiaceae

West and Central Africa

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

Information slip

Bush mango

Family: Irvingiaceae

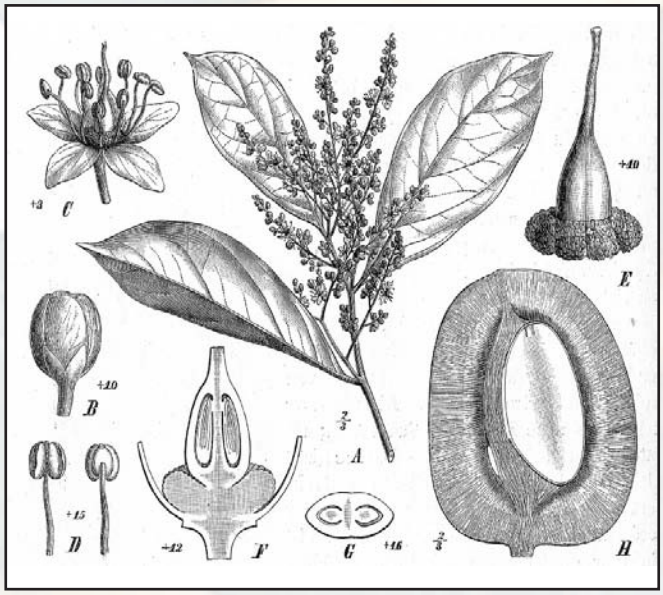
1. Species identity

• Names

Scientific name: *Irvingia gabonensis* (Aubry Lecomte)
Common names: African mango tree, bush mango, dika nut, wild mango
Vernacular names: (Cameroon) andok; ando'o; (Nigeria) oro, oba; (RDC) meba, mueba;

• Botanical description

Irvingia gabonensis grows to a height of 15–40 m, with bole slightly buttressed. Leaves range from elliptic to slightly obovate. Flowers can be yellowish to greenish-white, with slender individual flower stalks. Fruits are yellowish when ripe, broadly ellipsoid and variable in size, with a yellow, fibrous pulp surrounding a large seed.

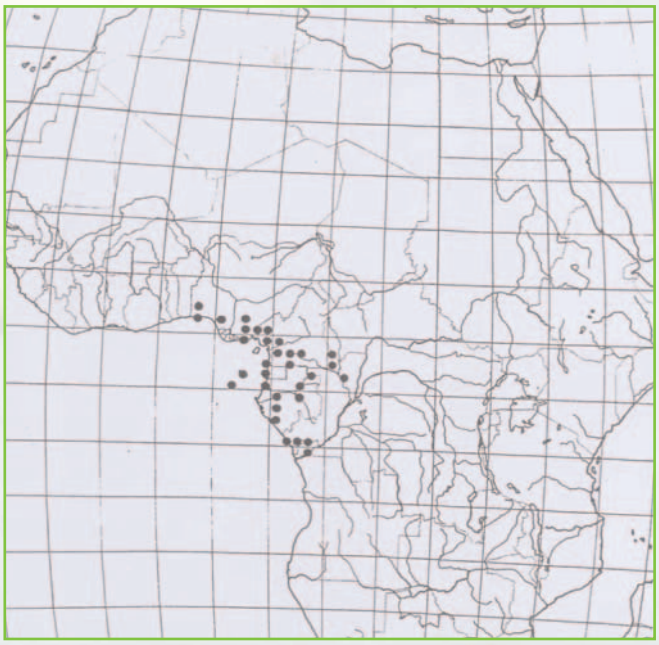


Botanical illustration
A: flowering branch, B: Bud, C: flowering, D: stamina, E: pistil, F: longitudinal section of the flower, G: cross section of ovary, H: longitudinal section of the fruit

2. Ecology and distribution

• Natural habitat and geographical distribution

Native of 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. *I. gabonensis* occurs in the wild, in lowland forest; it is reported to be gregarious in some areas. The tree is a species also grows in the dense moist forest.



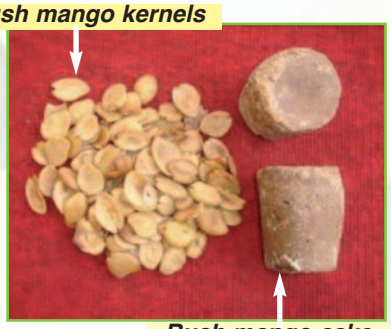
• Biophysical limit

Bush mango can be found at altitude range between 200 – 500 m. Temperature range for growth is between 25 and 32°C with a minimum annual rainfall range of 1500 – 3000 mm. It grows well in well-drained, acidic clayey sandy soils (pH<5), with low organic matter content (C<2%), low level of effective exchange capacity (ECEC<4 cmol/kg) and exchangeable bases (Ca<4 cmol/kg, K<0.15 cmol/kg, Mg<0.2 cmol/kg), low available phosphorus (P<15 mg/kg), relatively high degree of Al saturation which changes with human activity.

• Reproductive Biology

I. gabonensis is hermaphroditic, with flowers being pollinated by Coleoptera, Diptera, Hymenoptera and Lepidoptera. In Cameroon, it flower from March to June and fructification occurs from April to October. Its seeds are dispersed by vertebrates like elephants.

3. Uses



3.1. Products

- Food: fruit pulp is palatable and can be used to produce a fruit drink jam and wine. The kernel can be dried and ground into flour. The pounded seed is added to meat and various vegetable dishes. Margarine and cooking oil can be obtained from the kernels.
- Fodder: seeds can be used as cattle cake.
- Timber and woods: The timber of bush mango is used locally for construction. The wood is also used for making poles and stakes. Live branches are carved into walking sticks or thatched roof supports while dead branches are used as firewood.
- Lipids: kernels contain oil used for making soaps, cosmetics and pharmaceuticals.
- Medicine: The bark is the most important medicinal part of the tree. It can be used in the treatment of diarrhea, dysentery, gastrointestinal and liver disorders, sterility, hernias, urethral discharge. It is believed to be a laxative and a powerful aphrodisiac.

3.2. Services

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

4. Propagation Methods

4.1. Germination

- Seed pre-treatment: Remove pulp from fruits and air dry for 2 days under shade
- Substrate: 1:1 mixture of sawdust and forest soil
- Success rate: about 80%
- Germination period: 30 days

4.2. Rooting of cuttings

- Rooting medium: Decomposed Sawdust
- Leaf area: 80 cm2
- Cutting length: 3-6 cm
- Number of weeks before rooting start: 6 weeks
- Rooting success rate: more than 70% after 20 weeks
- Survival % after nursery: about 60%
- Potting medium after rooting: 2:1 mixture forest soil and sand
- Size of polythene bags: 1 litre.

4.3. Marcotting

- Rooting medium: Topsoil, oil palm inflorescence, compost or peat and decomposed sawdust
- Type and Diameter of branch: 2–4 cm
- Time before rooting start: 3 months
- Success rate at rooting: about 60% after 6 months
- Survival rate after weaning: about 40%

4.4. Grafting

- Side tongue grafting, top cleft grafting
- Survival rate: about 60%
- Use *I. wombolu* as rootstock

5. Planting and Management

5.1. Planting

In cultivating the Bush mango tree, only seedlings, rooted cuttings or marcotts that have spent at least 6 months under shade in the nursery can be transplanted. The recommended spacing for planting *I.gabonensis* in orchards is 10 x 10 m. Dig planting holes of 30 x 30 cm for seedlings, cuttings and grafted plants or 50 x 50 cm for marcotts.

5.2. Management

Weed 1 metre around the trees once every 2 months for the first year after planting. Apply NPK at a ratio of 20–10–10 and at the rate of 25 g/tree/year when the soil is poor. Do this at the beginning of the rainy season.

6. Pests

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.

Bibliography and Further Reading

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- *Illustrations : Bailey Hortorium, World Agroforestry Centre–West and Central Africa Region.*

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