

**LOCAL NAMES**

English (wild jackfruit,African breadfruit,African boxwood); French (abre á pain d' Afrique); Luganda (muzinda); Swahili (mwaya); Wolof (brebretim)

**BOTANIC DESCRIPTION**

*Treculia africana* is an evergreen forest tree 10-30 (max. 50) m in height and 3 m in girth with a dense spreading crown and fluted trunk. Bark grey, smooth and thick; when cut, exuding white latex which later turns rusty-red.

Leaves simple, alternate, very large, about 30 (max. 50) x 14 (max. 20) cm, dark green, smooth above, tough, paler below with some hairs on the 10-18 pairs of clear veins; tip pointed; a short stalk to 1.5 cm. Young leaves red or yellow.

Flower head brown-yellow, rounded, 2.5-10 cm across, male and female usually separate, growing beside leaves (axillary) or on older wood down the trunk.

Fruit compound, rounded, very large, on the trunk or main branches, containing many orange seeds, about 1 cm, buried in spongy pulp of the fruit. The outer surface is covered with rough pointed outgrowths. The fruit attains 40 cm in diameter and weighs 8-14 kg.

Based on detailed field observations, 3 varieties have been recognized: *T. africana* var. *africana*, *T. africana* var. *inversa* and *T. africana* var. *mollis*. Their taxonomic differences are based mainly on the size of the fruit head (infructence) and the hairiness of branchlets and leaves.

There is a striking variation in the number of fruit heads produced by trees belonging to *T. african* var. *africana* (with large fruit heads) and *T. african* var. *inversa* (with small fruit heads). The former is clearly superior in the weight of seeds produced while the latter produces more fruit and also produces twice as many branches.

**BIOLOGY**

*T. africana* is evergreen and starts producing fruit after 4 years. New leaves flush red. Flowering takes place in July and August in Ghana; ripe fruit is available in December, but may persist on the tree until July. Eventually it falls to the ground and is eaten by small animals, which help in distributing the seed.

**ECOLOGY**

A fruit tree of riverine forest in tropical Africa, *Treulia* is usually found near streams or in swampy areas in forests. It is not very light demanding and will grow in a wide variety of soils and climatic conditions. It will thrive in most tropical and subtropical regions.

**BIOPHYSICAL LIMITS**

Altitude: 0-1500 m

Mean annual rainfall: 1 250-3 000 mm

Mean annual temperature: 22-35 deg.C

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Angola, Benin, Cameroon, Central African Republic, Congo, Cote d'Ivoire, Democratic Republic of Congo, Equatorial Guinea, Gabon, Gambia, Guinea-Bissau, Liberia, Madagascar, Malawi, Mozambique, Nigeria, Sao Tome et Principe, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Zambia

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 seeds are extracted after macerating the fruit in water and then ground to a meal, known as breadfruit flour, which can be used to produce a variety of baked foods. A non-alcoholic beverage, almond milk, can be prepared from powdered seeds, which is recommended as a breakfast drink in Nigeria. Seeds can be dried, fried or roasted and eaten, and an edible oil can be extracted from them.

The grains have an excellent polyvalent dietetic value; the biological value of its proteins exceeds even that of soybeans. The flour can be made into bread, pasta, table oil, margarine and baby food.

**Fodder:** The fruit-head pulp and bran, which contain 9.4% and 5.7% protein, respectively, can be used in livestock feed. In Malawi, blue monkeys are very fond of the fruit and extract the seed. Leaves are used for fodder in Tanzania.

**Fuel:** *T. africana* is a suitable source of firewood and charcoal.

**Fibre:** The wood is suitable for pulp and papermaking.

**Timber:** The heartwood is yellow with very narrow pale sapwood; very dense, fairly elastic and flexible, rather heavy, with fine, even structure. It is suitable for furniture, carving, turnery and inlay wood. In Ghana, it is used for furniture and joinery.

**Lipids:** Analyses of the hexane extract of *Treculia* seeds indicate that it contains a stearine solid fat fraction, resembling that of palm-kernel oil, and an aleine fraction with a composition similar to that of cottonseed oil.

**Medicine:** In Ghana, a root decoction is used as an anthelmintic and febrifuge. The caustic sap of male African breadfruit is applied on carious teeth, a bark decoction is used for cough and whooping cough, and ground bark with oil and other plant parts for swellings. It is also used in the treatment of leprosy and as a laxative.

**Other products:** In West Africa the seed meal is added to soap.

**SERVICES**

**Erosion control:** *T. africana* has been used in soil conservation.

**Soil improver:** The tree is a good source of mulch.

**Intercropping:** *T. africana* has been recommended as a promising species for use in home gardens, and for intercropping systems in agroforestry.

**TREE MANAGEMENT**

*T. africana* is a fairly fast-growing tree. Under favourable climatic conditions and in good soil, 120-200 kg dried grains can be harvested in a year from 1 tree; this would translate to 5-10 t/ha.

**GERMPLASM MANAGEMENT**

Seed storage behaviour is orthodox. There are 4500-5000 seeds/kg.

**FURTHER READING**

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**SUGGESTED CITATION**

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