PLANT FACT SHEET

Ceratonia siliqua L.

GENUS *Ceratonia* **FAMILY** Fabaceae

COMMON NAMES Carob

EDIBLE PARTS AND USES

Edible parts: Fruit, Leaves, Seeds, Spice, Flowers

The seed pods can be eaten green or dried. They are sweet. The pulp can be used as a chocolate substitute. They are used for jam. The seed can be ground to make flour.
An edible gum can be extracted from the seed. It is a thickening agent and egg substitute. The roasted seed is a coffee substitute. The flowers are cooked in fritters.
The leaves can be used as a green vegetable. Caution: The leaves are probably purgative.
Caution: The pods contain tannin and can be toxic in large amounts.

DESCRIPTION

An evergreen tree. It grows 12-15 m tall. It spread to 4 m across. It has a dark green round crown of compound leaves. These almost hide the trunk. The trunk is short, erect and thick. The leaves are leathery. The tree flowers in autumn. Male and female flowers are on separate trees. They grow in flower clusters on the previous year's growth. The flowers are small and red. The pods develop in spring. The flat pods are 30 cm long and 2.5 cm wide. They are thick, brown rough and leathery. The seed are constant in size and were used for the carat weight (200 mg). There are several cultivated varieties.

HABITAT

It is a subtropical plant. It is native to Arabia. It suits warm temperate zones. It tends to grow in rocky places near the sea shore. It needs a well drained moderately fertile soil. It does well on calcareous soils. It can grow in alkaline soils. It is commonly seen on deep chalky soils where the limestone is cracked. It is very drought resistant. It suits hot and semi-arid regions. It grows in areas with an annual rainfall between 310-4,030 mm. It can tolerate some salt spray. The deep roots find moisture. It is frost tender. Symbiotic relationships with soil bacteria enable it to fix nitrogen. It can grow in arid places. It does not fruit well in high rainfall areas. It grows in Miombo woodland in Africa. In Brisbane Botanical Gardens. It suits hardiness zones 8-11.

PRODUCTION

Cultivation

Plants can be grown from seed. Seed should be pre-soaked for 24 hours in warm water prior to sowing. The swollen seed are then sown. They should be sown in soil at about 30°C. Germination can take 2 months. Better yielding shoots can be grafted into seedling rootstock. Cuttings can also be used. These should be from firm shoots 10 cm long. A spacing of 7-10 m is suitable.

Harvesting and Seed Production

It is very slow growing. Mature trees can yield 400 kg of seedpod per year. Fruit are produced after 10-12 years when grown from seed. Trees bear fruit in the fifth or sixth year after grafting. Trees can remain productive for 80-100 years. Pods are usually shaken off the tree. They are sun dried for 1-2 days.

NOTES

Biblical references Luke 15:16. There is only one (2) Ceratonia species. Chemical composition: Protein (crude) = 6.1% (dry). Fat = 2.6% (dry). Fibre (crude) = 2.2% (dry). Ash (insoluble) = 5.1% (dry). Carbohydrate (insoluble): Starch = 1.4% (dry). Sucrose = 0.8% (dry). D-glucose = 0.4% (dry). D-fructose = 0.2% (dry). Amino acids (g [16g N]-1): Aspartic acid = 5.9g. Threonine = 2.5g. Serine = 3.0g. Glutamic acid = 7.8g. Proline = 11.6g. Glycine = 7.4g. Alanine = 3.3g. Cysteine = 1.0g. Methionine = 0.7g. Isoleucine = 2.2g. Leucine = 3.8g. Tyrosine = 2.3g. Phenylalanine = 2.5g. Lysine = 3.0g. Histidine = 1.7g. Arginine = 4.3g. Minerals: Sulphur = 0.10% (dry). Potassium = 0 .09% (dry). Magnesium = 0.09% (dry). Calcium = 0.23% (dry). Na = 0.01% (dry). K = 1.48% (dry). Zinc = 17 mg/kg-1 (dry). Iron = 203 mg/kg -1 (dry). Manganese = 16 mg/kg-1 (dry). Copper = 7 mg/kg-1 (dry). Aluminium = 128 mg/kg-1 (dry). Also as Caesalpinaceae.

PICTURES



Credit: Food Plants International (Bruce French)



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