1. **Scientific name:** *Ceratonia siliqua* L.
2. **Local names:** *alfarrobeira* (Portuguese), *algarrobo* (Spanish), *caroubier* (French) and carob tree (English).
3. **Botanical aspects:**

http://en.wikipedia.org/wiki/Ceratonia_siliqua

4. **Distribution:**

The natural range of the carob tree is unclear, but it seems that it originates from the east Mediterranean or the Arabian Peninsula. From this locations it was transfer by the Greeks to

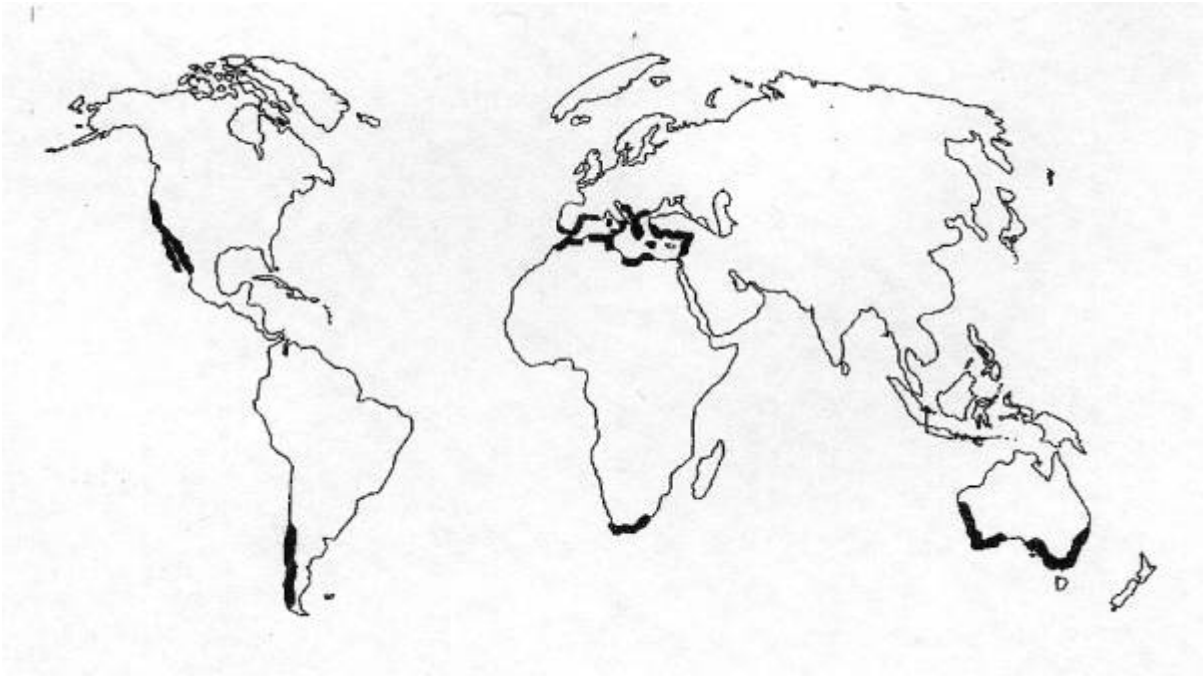

Illustration 1: World carob distribution and centres of origin

Greece and later on to Italy. The Arabs have introduced the carob tree to Spain via northern Africa, and from there to Portugal and France. Outside of its naturalized range it has been planted in Germany, United Kingdom, India, South Africa, USA, Chile, Brazil, Australia and New Guinea (Batle, 1997 and Forestry Compendium by CABI).

Natural trees are very common at low altitudes along the Mediterranean coast in Spain, France, Italy, Sicily, Croatia, Greece and Turkey, in addition to South Atlantic coast of Portugal. (Battle, 1997)

5. **Intra specific variation:**

There are no subspecies of *Ceratonia siliqua listed* at the *Flora Europaea* site hosted by the Royal Botanical Garden of Edinburgh. In some countries like Spain, Italy and Greece there are cultivars, some of the most important are Melas, Costolates, Lindas, Sonaglina, Sicilian, Massa and Cipro (Forestry Compendium by CABI).

6. **Ecological characteristics:**

The suitable areas for carob tree are those with a subtropical Mediterranean climate with cool not cold winters, mild to warm springs and warm to hot summers. Adult trees requires no winter chilling, temperatures bellow -7 ºC can kill the trees and temperatures under -4 ºC start to damage the trees. However, the trees can withstand summer temperatures of 40 ºC and hot dry winds. In summary, one of the main factors that controls populations of *Ceratonia siliqua* is cold stress but it is very resistance to drought stress. As a tree, carob tree can reach heights of 10 meters (López González, 1995 and Battle, 1997).

Carob trees can adapt to a wide range of soil types such as sandy, rocky or deep soils, but don't tolerate water logging conditions. The growth and fruit production is lower on shallow rocky soils, and the best performance is on sandy well-drained loams, admiting calcareous soils with high lime content (Battle, 1997).

Ceratonia siliqua is highly adapted to dry conditions with average rainfalls from 250 to 550 mm per year at the driest places. However, commercial crops require more than 550 mm per year (Battle, 1997).

One of the main products of the carob tree is carob bean gum or locust bean gum, which is a alimentary stabilizer. Sugars from the seeds can be also used for producing ethanol (Battle, 1997 and Forestry Compendium by CABI).

7. **Pest, diseases and other perturbations:**

The most common pest and disease that attacks the fruits of the carob tree are *Oidium ceratoniae*

and *Myelois ceratoniae* (Forestry Compendium by CABI).

8. **Provenance proposal:**

In case that this tree is part of the selection for the arboreta network more detail data of the geographic distribution and potential forest reproductive materials is needed.

9. **Reference bibliography:**

http://rbg-web2.rbge.org.uk/FE/fe.html

http://www.cabi.org/compendia/fc/index.asp

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