

## Theobroma cacao



**Cocoa tree**

### Scientific classification

Kingdom: Plantae  
Clade: Tracheophytes  
Clade: Angiosperms  
Clade: Eudicots  
Clade: Rosids  
Order: Malvales  
Family: Malvaceae  
Genus: Theobroma  
Species: *T. cacao*

### Binomial Name

**Theobroma cacao**

(L. 1753)

*Theobroma cacao* L. is the scientific name given to the cocoa or cocoa tree, native to subtropical tropical regions of South America: Tropical America, an evergreen plant of the Malvaceae family. *Theobroma* means, in Greek, "food of the gods".<sup>71</sup> *Theobroma cacao* originates from the Upper Amazon, where it has been cultivated for more than 5,000 years, originally by the Olmecs. Since at least the 7th century CE, cocoa beans were used by the Aztecs and the Incas as a form of currency, or to create the drink xocolatl. Xocolatl is the Nahuatl word from which 'chocolate' is ultimately derived

Currently, the Dominican Republic, Ghana and Ivory Coast are the three main producers and exporters of cocoa globally. The cocoa tree needs humidity and heat. It is evergreen and always flowering, growing between 5 and 10 m in height. It requires shade (they grow in the shade of other larger trees such as *Inga Edulis* and banana trees), protection from the wind and rich, porous soil, but does not develop well in warm, vaporous lowlands. Its ideal height is, more or less, 400 m above sea level. The soil must be rich in nitrogen, magnesium and potassium, and the climate must be humid, with a temperature between 20°C and 30°C.

The cocoa plant grows wild in the Amazon basin and the oldest trace was found south of Ecuador dating back to 5500 BC. It is theorized that it was transported in pre-Columbian times to Mesoamerica by humans, since it does not seem likely that it crossed naturally, because it is interposed by the cold Andes mountain range in the west or the jungle Gulf of Urabá in the northeast.<sup>72</sup>

### Cultivation

Cacao grows in the forest understory to a height of 6–12 metres (20–40 feet), usually remaining at the lower end of this range. Its oblong leathery leaves measure up to 30 cm (12 inches) in length, and are periodically shed and replaced by new leaves that are strikingly red when young. Its flowers are either foul-smelling or odourless; they can be present at all times but appear in abundance twice a year. These flowers grow in clusters directly from the trunk and limbs and are about 1 cm (0.4 inch) in height and breadth. They can be white, rosy, pink, yellow or bright red, depending on the variety, and are pollinated by tiny flies called midges in many areas.<sup>73</sup> After four years the mature cacao tree produces fruit in the form of elongated pods; it may yield up to 70 such fruits annually. Cacao thrives at altitudes of 30 to 300 meters (100 to 1,000 feet) above sea level in areas where temperatures do not range much below 20°C (68 °F) or above 28°C (82 °F). Rainfall requirements depend upon the frequency and distribution of rain and the degree of water retention by the soil; the minimum necessary rainfall is about 100 cm (39 inches) evenly distributed throughout the year, but 150–200 cm (59–79 inches) is optimal. Successful cultivation also requires deep well-drained soil that is porous and rich in humus. Protection against strong winds is necessary because of the tree's shallow root system.<sup>73</sup>

Because of the hazards of disease and pests, most of the world's cacao is grown on small labour-intensive farms of less than two hectares (five acres) instead of large plantations through which these hazards can rapidly spread. However, even with the protection of their small isolated farms, cacao growers frequently experience losses ranging from 30 to 100 percent of their crops, usually to disease. Cacao can also be grown in pristine rainforests at low densities as a form of agroforestry, providing an economic use for protected land.<sup>73</sup>