

# Cupuaçu



**Cupuaçu** (*Theobroma grandiflorum*), also spelled **cupuassu**, **cupuazú**, **cupu assu**, and **copoasú**, is a tropical rainforest tree related to cacao.<sup>[1]</sup> Common throughout the Amazon basin, it is widely cultivated in the jungles of Colombia, Bolivia and Peru and in the north of Brazil, with the largest production in Pará, followed by Amazonas, Rondônia and Acre.<sup>[1]</sup>

Cupuaçu trees usually range from 5–15 m (16–49 ft) in height, though some can reach 20 m (66 ft). They have brown bark and leaves are 25–35 cm (9.8–13.8 in) long and 6–10 cm (2.4–3.9 in) across, with 9 or 10 pairs of veins. As they mature, the leaves change from pink-tinted to green, and eventually they begin bearing fruit. Cupuaçu fruits are oblong, brown, and fuzzy, 20 cm (7.9 in) long, 1–2 kg (2.2–4.4 lb) in weight, and covered with a thick 4–7 mm (0.16–0.28 in), hard exocarp.<sup>[1]</sup>

## 1 Fruit

The white pulp of the cupuaçu has an odour described as a mix of chocolate and pineapple and is frequently used in

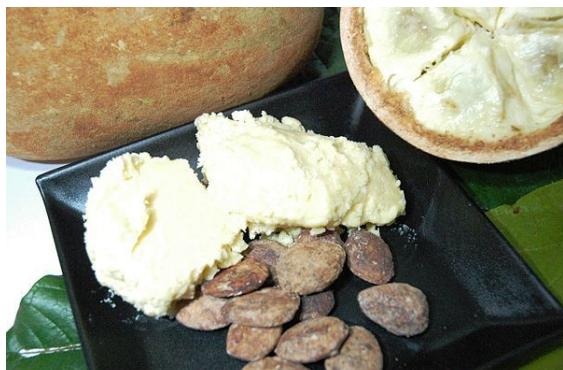
desserts, juices and sweets.<sup>[1]</sup> The juice tastes primarily like a pear, with a hint of banana.

## 2 Phytochemicals

Cupuaçu flavors derive from its phytochemicals, such as tannins, glycosides, theograndins, catechins, quercetin, kaempferol and isoscutellarein.<sup>[2]</sup>

It also contains caffeine, theobromine, and theophylline as found in cacao, although with much lower content of caffeine.<sup>[3]</sup>

## 3 Cupuaçu butter



*Cupuaçu butter (manteiga de cupuaçu)*

Cupuaçu butter is a triglyceride composed of saturated and unsaturated fatty acids, giving the butter a low melting point (approximately 30 °C) and texture of a soft solid, lending its use as a confectionery resembling white chocolate.<sup>[1]</sup> Main fatty acid components of cupuaçu butter are stearic acid (38%), oleic acid (38%), palmitic acid (11%) and arachidic acid (7%).<sup>[4]</sup>

## 4 Ecology

Cupuaçu supports the butterfly herbivore *lagarta verde*, *Macrosoma tipulata* (Hedylidae), which can be a serious defoliator.<sup>[5]</sup>



*Cupuaçu fruit opened*

## 5 See also

- Amazonian cuisine

## 6 References

- [1] Giacometti DC (1998). “Cupuaçu. In: Neglected Crops: 1492 from a Different Perspective, J.E. Hernández Bermejo and J. León (eds.). Plant Production and Protection Series No. 26. FAO, Rome, Italy, p. 205-209.”. Center for New Crops & Plant Products, Purdue University, Department of Horticulture and Landscape Architecture, W. Lafayette, IN, USA.
- [2] Yang, H.; Protiva, P.; Cui, B.; Ma, C.; Baggett, S.; Hequet, V.; Mori, S.; Weinstein, I. B.; Kennelly, E. J. (2003). “New bioactive polyphenols from *Theobroma grandiflorum* (“cupuaçu”).”. *Journal of Natural Products* **66** (11): 1501–1504. doi:10.1021/np034002j. PMID 14640528.
- [3] Lo Coco F, Lanuzza F, Micali G, Cappellano G (2007). “Determination of theobromine, theophylline, and caffeine in by-products of cupuaçu and cacao seeds by high-performance liquid chromatography”. *J Chromatogr Sci* **45** (5): 273–5. PMID 17555636.
- [4] Cohen, K. de O. & Jackix, M. de N. H. (2009). “Características químicas e física da gordura de cupuaçu e da manteiga de cacau” (PDF). *Documentos / Embrapa Cerrados* (in Portuguese) (269): 1–22.
- [5] Lourido, G.; Silva, N. M.; Motta, C. (2007). “Parâmetros Biológicos e Injúrias de *Macrosoma tipulata* Hübner (Lepidoptera: Hedylidae), em Cupuaçzeiro [*Theobroma grandiflorum* (Wild ex Spreng Schum)] no Amazonas” [Biological parameters and damage by *Macrosoma tipulata* Hübner (Lepidoptera: Hedylidae), in Cupuaçu tree [*Theobroma grandiflorum* (Wild ex Spreng Schum)] in Amazonas, Brazil] (PDF). *Neotropical Entomology* (in Portuguese) **36** (1): 102–106. doi:10.1590/S1519-566X2007000100012. PMID 17420867.

## 7 External links

- A collection of cupuaçu photos.

## 8 Text and image sources, contributors, and licenses

### 8.1 Text

- **Cupuaçu** *Source:* <https://en.wikipedia.org/wiki/Cupua%C3%A7u?oldid=702407110> *Contributors:* Edward, Dragons flight, MPF, Mboverload, ClockworkLunch, CiXeL, Hesperian, Keenan Pepper, Stemonitis, Jeff3000, SDC, Rjwilmsi, Dvulture, Ricardo Carneiro Pires, FlaBot, Eubot, Gdrbot, YurikBot, Dysmorodrepanis~enwiki, Grafen, TDogg310, Open2universe, Newleo, KnightRider~enwiki, SmackBot, Brya, HalfShadow, Berton, Deli nk, Tamfang, Sei Shonagon~enwiki, Cydebot, Cuzandor, Thijs!bot, Fabykot, TheEditrix2, Nono64, Melamed katz, Idioma-bot, Zyzzyx, AlleborgoBot, SieBot, MenoBot, Traveler100, Alexbot, Addbot, AndersBot, Luckas-bot, Yobot, KamikazeBot, LilHelpa, Xqbot, Gigemag76, Zefr, SassoBot, HRoestBot, RjwilmsiBot, Alph Bot, EmausBot, WikitanvirBot, P. S. Freitas, ZéroBot, Josve05a, H3llBot, Jeffconner, ClueBot NG, Christophervanburen, Baseball Watcher, Candleabracadabra, NotWith, Srt<sup>a</sup> PiriLimPomPom, P. S. Sena, EconomicScientist and Anonymous: 25

### 8.2 Images

- **File:CUSYST11.JPG** *Source:* <https://upload.wikimedia.org/wikipedia/commons/3/32/CUSYST11.JPG> *License:* CC-BY-SA-3.0 *Contributors:* german wikipedia *Original artist:* M.-A. Wolf
- **File:Cupuacu\_fruit\_opened.jpg** *Source:* [https://upload.wikimedia.org/wikipedia/commons/0/0b/Cupuacu\\_fruit\\_opened.jpg](https://upload.wikimedia.org/wikipedia/commons/0/0b/Cupuacu_fruit_opened.jpg) *License:* CC BY-SA 2.0 de *Contributors:* Own work (Original text: *selbst erstellt*) *Original artist:* BjoernS
- **File:Cupuaçu\_butter.JPG** *Source:* [https://upload.wikimedia.org/wikipedia/commons/e/e3/Cupua%C3%A7u\\_butter.JPG](https://upload.wikimedia.org/wikipedia/commons/e/e3/Cupua%C3%A7u_butter.JPG) *License:* CC BY-SA 4.0 *Contributors:* Own work *Original artist:* P. S. Sena

### 8.3 Content license

- Creative Commons Attribution-Share Alike 3.0