

Bixa orellana

[Synonyms : *Bixa acuminata*, *Bixa americana*, *Bixa odorata*, *Bixa odorata* var. *leiocarpa*, *Bixa platycarpa*, *Bixa purpurea*, *Bixa tinctoria*, *Bixa upatensis*, *Orellana americana*, *Orellana orellana*]

ANNATO (Brazilian, English, French, Portuguese, Russian) is an evergreen shrub or tree. Native to northern South America and to the Caribbean, it has small red, pink, or white flowers with many stamens.

It is also known as *Açafrão da terra* (Brazilian, Portuguese), *Açafrão do Brasil* (Portuguese), *Achihuite* (Colombian, Spanish), *Achiote* (Japanese, Russian, Spanish), *A chi o te* (Korean), *Achiote caspi* (Spanish), *Achuéte* (Filipino/Tagalog), *Achwete* (Filipino/Tagalog), *Acote* (Italian), *Anato* (Portuguese), *A na to* (Korean), *Anatoo* (Japanese), *Anatto* (Dutch, English, German, Japanese), *Anattosamen* (German), *Anatto tree*, *Annaatto* (Finnish), *Annatobusken* (Danish), *Annatopöösa* (Estonian), *Annatta* (German), *Annatto* (English, Italian), *Annatobuske* (Swedish), *Annatto plant*, *Annatto seeds*, *Annatto tree*, *Anotta*, *Anotto* (Italian), *Arnatto*, *Arnatto dye plant*, *Arnotta*, *Asuete* (Filipino/Tagalog), *Beni no ki* (Japanese), *Bijol* (Spanish), *Biksa* (Russian), *Biksa orel'ina* (Russian), *Bik sa sok* (Korean), *Bjoul* (Hungarian), *Chacuanguarica* (Puerto Rican, Spanish), *Châm'puu* (Khmer), *Châm'puu chrâluëk'* (Khmer), *Điêu nhuôm* (Vietnamese), *Echuete* (Filipino/Tagalog), *Galuga* (Javanese, Sundanese), *Hong mu* (Chinese), *Hột điều màu* (Vietnamese), *Jabra* (Tamil), *Japhara* (Tamil, Telugu), *Jarak belanda* (Malay), *Kam sêt* (Thai), *Kam tai* (Thai), *Kealia* (Hawaiian), *Kesum* (Malay), *Kesumba* (Indonesian, Malay), *Kesumba kling* (Indonesian, Malay), *Kh'am* (Laotian), *Kham faet* (Thai), *Kham ngae* (Thai), *Kham ngo* (Thai), *Kham thai* (Thai), *Kongaram* (Tamil), *Kunyit jawa* (Malay), *Lathwa* (Hindi), *Latka* (Bengali), *Latkan* (Bengali, Hindi), *Latkana* (Hindi), *Lipstick plant*, *Lipstick tree*, *Onoto* (Spanish, Venezuelan), *Orellana*, *Orleánfa* (Hungarian), *Orleana*, *Orlean-drvo* (Serbian), *Orleansamen* (German), *Orleansbaum* (German), *Orleanstrauch* (German), *Orleantræ* (Danish), *Pomadnoe derevo* (Russian), *Pumacua* (Puerto Rican, Spanish), *Red red*, *Rocou* (Dutch), *Roucou* (French), *Roucouyer* (French), *Rucu* (Dutch), *Ruku* (Hungarian), *Sappira* (Tamil), *Satii* (Laotian), *Sendrii* (Marathi), *Sindhuri* (Hindi), *Sindur* (Nepalese), *Sindure* (Nepalese), *Sinduri* (Sanskrit), *Sinduriya* (Hindi), *Smørfarvetræ* (Danish), *Sômz phuu* (Laotian), *Sotis* (Visayan), *Urucú* (Brazilian, Portuguese), *Urucú bravo* (Brazilian, Portuguese), *Urucú da mata* (Brazilian, Portuguese), *Urucum* (Brazilian, Portuguese), *Värvibiksa* (Estonian), *Woucou* (Creole), *Yan zhi mu* (Chinese), and *Yan zhi shu* (Chinese).

Bees are attracted to the flowers. Prickly, brown to rose-coloured fruit shells burst in two when dry to release the seeds. If the seed-coating has a sweetish smell, it indicates fermentation, and the best quality has no smell.

An extract of the seed coating has a penetrating bitter saline flavour. An edible colouring matter is extracted from the fruit lining around the seeds.

Orellana commemorates a Spanish explorer and conquistador, Francisco de Orellana (c. 1490-c. 1549) who crossed the Andes in 1541 and followed the Amazon River to its mouth after he and his men had been separated from the rest of Gonzalo Pizarro's (c. 1506-1548) unsuccessful expedition to find El Dorado. Apparently the Amazon had previously

been called Rio Santa Maria de la Mar Dulce and, after a tribal Indian attack in which Orellana was convinced he had seen women fighting alongside men, it is held that the river was re-christened with its present name. These women, who he is said by some authorities to have also come across living at different points along the riverbank, may well have been long-haired Indian men and again, according to some authorities, are said to have reminded Orellana of the Amazon women of Greek myth. According to legend the women were either female warriors and/or the dominant sex in a land situated on the edge of the world as then known to the ancient Greeks. (Most of the dates relating to Orellana seem to be uncertain.)

The Aztecs used annato powder to flavour their drinking chocolate (*Theobroma cacao*) long before Europeans invaded the Americas.

Archaeologists have found evidence of annato in ancient Peruvian graves, and some South American Indian tribes and some Caribbean Indians, believed the plant to be sacred. The waxy red coating which covers the seeds was used to make a paste with which they coloured their bodies and decorated their faces, both as peacetime decoration and as war paint (some claim that it was this that led to the term 'Red Indian' and that the red paint was meant to imbue courage as it would mask warrior's bleeding wounds during battle). [Many authorities believe that it was the North American Indian use of chestnut oak (*Quercus prinus*) or alternatively bloodroot roots (*Sanguinaria canadensis*) that led to the term 'Red Indian'.] For at least one tribe the paint was also used in rituals at the birth of a child. To ensure that the child would be, variously, strong in its body or impervious to witchcraft or grown in health, he or she was (and still can be) painted with the red dye in dots or designs all over the body when newborn.

Today the dye is still in wide use locally, particularly for colouring ceramics, tools, weapons and threads. In Ecuador the Colorado Indians use the red paste to mould a traditional helmet-like hairstyle. Some of the South American Indian tribes also believe that the orange colour of one of the dyes acts as an insect repellent, particularly for the mosquito.

By the 17th Century when chocolate was beginning its progress through western Europe annato was being imported into the Continent not least as one of the 'essential' flavourings for this new drink. During the following Century the orange or red colourings with which Cheshire and Red Leicester cheeses are associated were obtained by English cheesemakers from using this new and virtually tasteless natural edible dye.

At the beginning of the 1980s world production of annato was estimated to be about 3,000 tonnes but by the end of that decade this had tripled. As an alternative to many synthetic food and medicine colouring agents that were attracting restrictions on their use, annato's colouring qualities were appreciated, especially by the dairy industry. Brazil especially has taken advantage of this renewed interest in the crop and although the world market for colouring additives is small (and the colouring elements extracted from annato can be variable in quality in commercial terms) other assets have been identified. Authorities recognise a high yield potential and this, combined with the plant's stamina which enables it to be grown in exhausted tropical soils, appears to recommend it strongly as a viable alternative to a grain crop.

Fibre from the smooth bark has been used for rope.

In parts of America (and in other countries, including Malaysia) the plant is grown as a living fence.

In India the dye has been used to colour soap, paint and varnish. Locally shoe shiners in the Philippines used to make a brown shoe polish from the small, angular, orange-red seeds as well.

Although the Spanish are understood to have introduced annato to the Philippines from the east ie. across the Pacific Ocean, it is believed by some authorities that the plant reached India

from the west – and from there progressed to Malaysia. In the early 1800s authorities note that annato's spread through the Indian state of Bengal was believed to be due not least to its value as a source of a yellow dye. Not long after this, in 1828, Java (now an Indonesian island) was to value the dye as an export commodity for the European market and decree that it should be planted along roadsides for this purpose.

Mention has already been made of the commercial use of annato. The food industry uses the extracted food colouring today to give a red to yellow colour to cheeses eg. Cheddar (as well as Cheshire and Red Leicester), Edam, or Mimolette, to dried, salted and smoked fish eg. haddock, and to butter, ice cream, mixed seasonings, frankfurters, sausages, imitation creams, fish fingers, confectionery and pastries. The powder can provide a far less expensive alternative for saffron (*Crocus sativus*) and can be bought for domestic use in grocery stores in Latin America. However it does have a penetrating flavour and this is emphasized when one considers that commercially, when used in processed food, the proportion of annato to the remainder of the ingredients is 1:400.

The colouring is also used today in varnishes and wood stains, as a dye for silk fabrics, and as colouring in medicine. It is understood that anglers can buy maggots coloured with the plant's pigment to make them more alluring for the fish

Medicinally, in India the leaves have been used in remedies for jaundice and snake bites, and in other parts of Asia they have been used to treat fever. Locally the bark has been used to treat dysentery and in the prevention of scars after wounds have healed. In Western medicine the dye has been used as a colouring in ointments.