

Pachyrhizus erosus

[Synonyms : *Cacara bulbosa*, *Cacara erosa*, *Cacara palmatiloba*, *Dolichos articulatus*, *Dolichos bulbosus*, *Dolichos erosus*, *Dolichos palmatilobus*, *Pachyrhizus angulatus*, *Pachyrhizus articulatus*, *Pachyrhizus bulbosus*, *Pachyrhizus erosus* var. *palmatilobus*, *Pachyrhizus erosus* var. *typicus*, *Pachyrhizus jicamas*, *Pachyrhizus palmatilobus*, *Pachyrhizus panamensis*, *Pachyrhizus strigosus*, *Pachyrhizus vernalis*, *Robynsia lobata*, *Robynsia macrophylla*, *Stizolobium bulbosum*, *Stizolobium domingense*, *Taeniocarpum articulatum*]

YAM BEAN is a perennial, twining/climbing vine. Native to Middle and South America (especially the Amazon Basin) it has pea-like, pale blue or dark purple to white flowers with green-blotched base.

It is also known as *Bangkawang* (Sundanese), *Bengkoewang* (Dutch), *Bengkawang* (Javanese), *Bengkawang* (Indonesian), *Bengkuwang* (Malaysian), *Besusu* (Javanese), Chop-suey bean, *Củ dậu* (Vietnamese), *Củ sắn* (Vietnamese), *Dolico bulboso* (Italian), *Dolique bulbeuse* (French), *Dou shu* (Chinese), *Fagiolo patata* (Italian), Four-lobed-root yam bean, *Frijolnme* (Filipino/Tagalog), *Hoewi iris* (Dutch), *Huapaekua* (Thai), *Iguama* (Filipino/Tagalog), *Jacatupé* (Portuguese), Jicama (English, Mexican), *Jiquima* (Spanish), *Jocotupé* (Portuguese), *Judía batata* (Spanish), *Kamias* (Filipino/Tagalog), *Knollige Bohne* (German), *Köklü böyrüce* (Turkish), *Kuzuimo* (Japanese), *Mame imo* (Japanese), Manioc bean, *Man keo* (Thai), *Man ph'au* (Lao), Mexican potato, Mexican turnip, Mexican yam bean, *Mexikansk yamsbønne* (Danish), *Mishrikand* (Hindi), *Pe'kuëk* (Khmer), *Pois patate* (French), Potato bean, *Pre myit* (Burmese), *Sakalu* (Assamese), *Sankalu* (Hindi), *Sengkawang* (Malaysian), *Sha got* (Chinese – Cantonese), Short-podded yam bean, *Sinkamaas* (Filipino, Tagalog), *Tani-uttankelengu* (Tamil), Three-lobed-leaved yam bean, *Yambohne* (German), and *Yamsbønne* (Danish).

The mature root can weigh as much as 50 lb. or more.

Warning - leaves, stems and seeds (which contain similar drugs to those in the *Derris* and *Paraderris* genera) are poisonous – and the ripe fruit pods may also be toxic. Horses are said to be immune to the drugs in the leaves but some authorities note that the roots and young pods may be poisonous for birds.

Erosus means ‘with irregularly toothed edges, jagged, or gnawed’.

The common name Jicama is pronounced ‘hecama’.

Archaeologists have proved that the crispy sweet-tasting, starchy tubers with their chestnut-like (*Castanea sativa*), even apple (*Malus domestica*), flavour were being eaten from at least as early as the Mayan period. The twining vine was sometimes cultivated with maize (*Zea*) as a support. After the Spaniards landed on American soil peeled young tubers were one of the new foods to which they were introduced and these must have impressed them to some degree as Spanish explorers then introduced the vine to the Philippines in the 17th Century – from whence the plant progressed through Asia and India and some authorities say through the Pacific to the Caribbean.

Local fishermen dropped the pounded ripe, yellow, brown or red seeds into the water to stun fish – while in Fiji they used stem fibre for making their fishing nets.

In Mexico today the young tuberous underground stems (with the peel and fibrous layer removed) are eaten raw or marinated. They are also boiled as a vegetable– or added to soup. Nowadays these tubers can be found far from their native habitat but they do not seem to have excited as yet a significant following as a food source in their new homes – although Malaysians do eat the tubers with a fermented prawn sauce, Indonesians add the root to a fruit salad, and the Chinese both stir-fry and pickle the root. Some authorities suggest that it has become or is in the process of being recognized widely as an acceptable alternative to water chestnut (*Trapa natans*) in many oriental dishes. (The young unripe green pods have also offered an alternative to French beans, *Phaseolus vulgaris*.) Some authorities point out that in the diet-conscious climate of the early 21st Century in the West the relatively low calorie/high protein content of these starchy roots is notable – and they also remark upon the burgeoning market for the roots, certainly in some of the southern States of North America where it is primarily added to salads and snacks – sufficient to warrant their export from Mexico. The roots are also imported by Canada.

Older tubers have a higher starch content and the Chinese in San Francisco have imported these specifically for making starch.

The plant with its large green leaves is widely cultivated in the tropics. It has been used in many places as a green manure which is generally avoided by animals – a distinct advantage.

Authorities on south-eastern Asia claim that despite the plant's lesser popularity there (compared with its homeland) it is primarily appreciated as a food source (in its turnip-shaped tubers, *Brassica rapa*) – and it is then valued for vegetable oils and fats, as well as the fruit pod vegetables it can supply, its medicinal or fibrous properties, and the poisons it can yield.

Yam bean with sugar cane (*Saccharum officinarum*), tangerines (*Citrus reticulata*) and peanuts (*Arachis hypogaea*) plays a significant role in the Mexican Festival of the Dead which takes place annually on 1st November. 'Jicama dolls' made from paper strips also feature in these festivities.

Plant fibre has been used for basketry, matting and wickerwork.

At the turn of the 20th Century researchers are now investigating commercial uses for the starch and the extension of existing markets in Asia and the Americas, in addition to the root's advantages for the dietary food processing industry.

Medicinally, half a seed has been taken as a laxative according to local remedies. In some parts of Asia the seeds have also been used to treat worms, and in Java particularly it seems that the powdered seed has been applied to skin to ease prickly heat.