

Arrowroot

Botanical: *Maranta arundinaceae* (LINN.)

Family: N.O. Marantaceae

Synonyms

Indian Arrowroot. *Maranta Indica*. *Maranta ramosissima*. *Maranta Starch* or Arrowroot. East or West Indian Arrowroot. Araruta. Bermuda Arrowroot.

Part Used

The fecula or starch of the rhizome.

Habitat

Indigenous in the West Indian Islands and possibly Central America. Grows in Bengal, Tava. Philippines, Mauritius. Natal. West Africa.

Description

The name of the genus was bestowed by Plumier in memory of Bartommeo Maranto (*d.* 1559, Naples), a physician of Venosa in Basilicata. The popular name is a corruption of the Aru-root of the Aruac Indians of South America, or is derived from the fact that the plant is said to be an antidote to arrow-poison.

The product is usually distinguished by the name of the place from which it is imported. Bermuda Arrowroot was formerly the finest, but it is now rarely produced, and the name is applied to others of high standard.

It was introduced into England about 1732 though it will only grow as a stove plant, with tanners' bark. The plant is an herbaceous perennial, with a creeping rhizome with upward-curving, fleshy, cylindrical tubers covered with large, thin scales that leave rings of scars. The flowering stem reaches a height of 6 feet, and bears creamy flowers at the ends of the slender branches that terminate the long peduncles. They grow in pairs. The numerous, ovate, glabrous leaves are from 2 to 10 inches in length, with long sheaths often enveloping the stem.

The starch is extracted from rhizomes not more than a year old. They are washed, pulped in wooded mortars, stirred in clean water, the fibres wrung out by hand, and the milky liquor sieved, allowed to settle, and then drained. Clean water is again added, mixed, and drained, after which the starch is dried on sheets in the sun, dust and insects being carefully excluded. The starch yield is about one-fifth of the original weight of the rhizomes. It should be odourless and free from unpleasant taste, and when it becomes mouldy, should be rejected. It keeps well if quite dry. The powder creaks slightly when rubbed, and feels firm. Microscopical examination of the starch granules is necessary for certainty of purity. Potato starch, which corresponds in chemical and nutritive qualities, is sometimes substituted, but it has a somewhat

unpleasant taste, and a test with hydrochloric acid brings out an odour like French beans. Sago, rice and tapioca starches are also found occasionally as substitutes.

The jelly is more tenacious than that of any other starch excepting *Tous-les-mois*.

Arrowroot is often used simply in the form of pudding or blanc-mange. The roots could be candied like Eryngo.

Constituents

An 1887 analysis of the root of the St. Vincent Arrowroot gave starch 27.17 per cent, fibre, fat, albumen, sugar, gum, ash, and 62.96 per cent water.

Of the starch was given: starch 83.70 per cent., fibre, fat, sugar, gum, ash and sand, and water 15.87 per cent.

The official granules, according to Pereira, are 'rarely oblong, somewhat ovate-oblong, or irregularly convex, from 10 to 70 microns in diameter, with very fine lamellae, a circular hilum which is fissured in a linear or stellate manner.'

Medicinal Action and Uses

Arrowroot is chiefly valuable as an easily digested, nourishing diet for convalescents, especially in bowel complaints, as it has demulcent properties. In the proportion of a tablespoonful to a pint of water or milk, it should be prepared by being first made into a smooth paste with a little cold milk or water, and then carefully stirred while the boiling milk is added. Lemon-juice, sugar, wine, or aromatics may be added. If thick, it will cool into a jelly that usually suits weaning infants better than other farinaceous foods.

It is said that the mashed rhizomes are used for application to wounds from poisoned arrows, scorpion and black spider bites, and to arrest gangrene.

The freshly-expressed juice, mixed with water, is said to be a good antidote, taken internally, for vegetable poisons, such as Savanna.

Other Species

Maranta ramosissima is the *M. arundinaceae* of the East Indies.

M. allouya and *M. nobilis* are also West Indian species. The term arrowroot is applied to other starches.

BRAZILIAN ARROWROOT, or Tapioca Meal, is obtained from *Manihot utilissima* (bitter) and **M. palmata** (sweet) . It is also called Bahia Rio, or Para-Arrowroot.

TAHITI ARROWROOT is from *Tacca oceanica (pinnatifida)*. It is a favourite article of diet in the tropics, being found in the Sandwich and South Sea Islands, and is said to be the best arrowroot for dysentery.

EAST INDIAN ARROWROOT is from *Curcuma augustifolia*, or *longa*.

TOUS-LES-MOIS is from *Canna edulis* and *C. achiras*, of the West Indies, called Indian Shot, from their hard, black seeds, used as beads, and Balisier, from the use of their leaves for packing, in Brazil.

OSWEGO ARROWROOT, used in America, is from *Zea Mays*, Indian Corn.

MEXICAN ARROWROOT is from the seeds of *Dion edule*.

CHINESE ARROWROOT is said to be from the tubers of *Nelumbium speciosum*.

PORTLAND ARROWROOT was formerly obtained from *Arum maculatum*, but it was acrid and not very satisfactory.

M. dichotoma has stems used, when split, for making shade mats in India.

M. Malaccensis has poisonous roots used as an ingredient in a Borneo arrow-poison.