

Musa acuminata

[Synonyms : *Musa acuminata* subsp. *acuminata*, *Musa acuminata* var. *alasensis*, *Musa acuminata* var. *bantamensis*, *Musa acuminata* var. *breviformis*, *Musa acuminata* var. *cerifera*, *Musa acuminata* var. *longipetiolata*, *Musa acuminata* var. *nakaii*, *Musa acuminata* var. *rutilipes*, *Musa acuminata* var. *violacea*, *Musa acuminata* var. *zebrina*, *Musa brieyi*, *Musa cavendish*, *Musa cavendishii*, *Musa cavendishii* var. *hawaiiensis*, *Musa cavendishii* var. *pumila*, *Musa cerifera*, *Musa chinensis*, *Musa corniculata*, *Musa malaccensis*, *Musa nana*, *Musa rhinozerotis*, *Musa rumphiana*, *Musa sapientum*, *Musa simiarum*, *Musa simiarum* var. *violacea*, *Musa sinensis*, *Musa zebrina*, *Musa zebrina* forma *cerifera*, *Musa zebrina* forma *rutilipes*]

BANANA (English, Spanish) is an evergreen, palm-like perennial (not a tree). Native to India and Malaysia, it has yellowish-white flowers.

It is also known as *Ädelbanan* (Swedish), *Banaani* (Finnish), *Banan* (Swedish), *Banana da China* (Portuguese), *Banana di Cina* (Italian), *Banane* (French, German), *Banane de Chine* (French), *Bananeira anã* (Portuguese), *Banane sauvage* (French), *Bananier de Chine* (French), *Bananier nain* (French), *Banan plante* (Danish), *Chinabanane* (German), *Chinese banaan* (Dutch), Chinese banana, *Chuói rừng* (Vietnamese), Commercial banana, Dessert banana, Dwarf banana, Dwarf cavendish, Edible banana, *Gao jiao ya jiao* (Chinese), *Goa jiao xiang jiao* (Chinese), *Guineo* (Spanish), *Kanariebanan* (Swedish), *Kela* (Hindi), *Kwadu* (Twi), *Maia* (Hawaiian), Monkey banana, *Mōz* (Arabic), *Platano de China* (Spanish), *Raad i bananspidsen* (Danish), Sweet's banana, *Sygdøm i bananspidsen* (Danish), *Tethawe ega* (Omaha North American Indian), *Tsiu* (Chinese), *Vala* (Tamil), *Vazha* (Malayalam), Wild banana, *Xiang jiao* (Chinese), *Xiao guo ye jiao* (Chinese), Wild banana, *Zhong guo ai jiao* (Chinese), and *Zwerg-Banane* (German).

Botanically use of the words 'tree', 'flowers', 'fruit' and 'seeds' are incorrect but the terms are adopted here for convenience.

There are about 300 varieties. The finger-like, sometimes brown-stained, yellow fruit form clusters (or hands) of 50-400. The central spike (trunk) or stem dies after fruiting and a new plant develops (over 18 months) around the base. In the banana plantations pieces of the underground stem or cuttings are taken from the spontaneously developing young shoots.

Acuminata is derived from Latin *acumen* (sharp point) meaning 'tapering to a long narrow pointed tip' with reference to the leaf shape.

Initially bananas were called Figs by Europeans. The name Banana in its various forms would appear to be derived from West African names for the fruit (such as *banema*, *bana*, *banana* or *ghana*) learnt by Portuguese sailors at the beginning of the 15th Century. An Indian legend that places Paradise on the island of Sri Lanka suggests that the banana was the forbidden fruit in the Garden of Eden and it describes how Adam and Eve used banana leaves to cover their bodies when they were banished from the Garden. No doubt this goes some way to explain the derivation of two of the old names for the banana, Adam's fig and Paradise banana.

For Buddhists the banana represents the futility of earthly possessions. This is illustrated by the Chinese in their drawings of Buddha sitting under a banana tree (plant) in contemplation

of this tenet. The association is said to arise from the fact that the flowers are sterile so fertilization does not take place.

Although it is believed that the banana somehow began life in south-eastern Asia, where many viewed it as a gift from the gods, the history of its appearance in other parts of the world such as the Americas seems to be open to much debate. Some say that the first Europeans to see the fruit were the soldiers in Alexander the Great's army when he invaded India in 326 BC. However if Alexander the Great had the opportunity to enjoy the fruit growing then he is unlikely to have found them as palatable as today's varieties as the many seeds of the wild banana are very hard. There are some authorities who point to pre-Christian times and suggest that references made to bunches or clusters of grapes found in Jordan (in the stories of Moses in the Old Testament of the *Bible*) could actually have been bananas, while others indicate its arrival in the Near East and north-eastern Africa eg. Ethiopia, during the 6th and 7th Centuries (the early Islamic years when the Arabs were probably cultivating the fruit in that area). The latter seems to be supported by the fact that the ancient Egyptians were unaware of the existence of the fruit. Some natural historians suggest that bananas may have arrived in the southern part of the African Continent via Madagascar and her Indonesian invaders in the 10th Century. Certainly banana plants are said to have spread to all conducive parts of Africa by the 14th Century. Yet the banana was still rare in Europe even in the 14th-15th Centuries although European travellers (the Portuguese especially) had come across them when abroad. The fruit only began to be familiar in France in the 1700s when the Portuguese introduced them there. It has been suggested that among the first Europeans to sample a palatable banana (compared with the fruit that may have been eaten by Alexander the Great and his men) was Napoleon (1769-1821), the Emperor of France. This could have been early on in his life if the fruit, brought from Josephine's mother in Martinique in the Caribbean, were enjoyable by the time they arrived at their European destination. Otherwise some say he enjoyed them as rum-moistened banana fritters during his ultimate banishment on the island of St. Helena where he died.

The English botanist, Sir Joseph Banks, is said to have found bananas growing in Queensland, Australia when he accompanied Captain Cook on his 1768-71 expedition.

The banana has long grown in Hawaii, and was probably introduced there by the Polynesians. Although it provided food Hawaiian women were forbidden to eat the fruit if these were growing in designated areas, as bananas (together with certain other produce) were considered at that time to be exclusive offerings for the gods.

The fruit are believed by some authorities to have reached the West Indies by 1500 (Barbados specifically only later in 1627) and to have been introduced to Central and South America in 1516 from the Canary Islands. Others declare that it was first planted in 1516 too on the island of Hispaniola (now divided into Haiti and the Dominican Republic). In any event it was not until 1870 that they were initially exported to the United States – where they are believed to have caused such excitement that it encouraged a businessman, Minor Cooper Keith (1848-1929) who had built a railroad in Costa Rica in 1871, to plant bananas there in 1874.

Europe only saw bananas in any quantity when they arrived from the New World in the 1920s in specially equipped banana boats that enabled the fruit to be satisfactorily transported in air-conditioned holds.

With the Boston Fruit Company Keith had formed the United Fruit Company which (until the 1950s) wielded such power that it could exert its influence on various Middle American governments. This is well illustrated by the alleged 1954 intervention of the Government of the United States in Guatemalan politics – although the official reason given at the time was the need to prevent the spread of Communism and this also happened to protect

the banana Company's interests. The United Fruit Company (which was to become United Brands) long competed with several other banana giants in Latin America and over decades this competition involved aggressive tactics. These included :

- the deployment of armed men to prevent exportation of disputed banana cargoes;
- the establishment of banana communities in which employees were unable to own land and whose every need was catered for by the Company concerned (as happened in Europe and North America when the railways were being built);
- environmental damage perpetrated over 1,000s of acres from the use of pesticides;
- interference in and distortion of the politics and economics of several Latin American countries as already mentioned and
- around the turn of the the 20th/21st Centuries attempts by the large banana barons to force smaller communities, such as those in the Windward Islands, out of business.

Although most of the Western world sincerely believed that completion of the GATT (General Agreement on Tariffs and Trade) talks in the closing decades of the 20th Century would enable countries as a whole to benefit from the advantages of free trade and avoid the handicaps of trade disputes, there were those authorities that noted early in the discussions that parts of the banana industry could be one of many examples of the exception to the rule. A relevant instance here can be found in the Windward Islands, a one-crop economy in the Caribbean dependent upon the bananas grown on its many family smallholdings. The Windward Islands were facing extreme hardship unless their banana exports were given some protection as they would appear to have no alternative, practicable, legal source of revenue. In the 1990s this musing became reality and brought into focus a vital and difficult issue that some authorities suggest may have been overlooked in the original GATT conclusions – that free trade must also be fair trade. After the GATT Agreement European countries continued to import bananas (on preferential access terms) from their former colonial countries in the Caribbean in particular eg. the Windward Islands, but also from Africa and the Pacific, despite pressure from the United States to halt such activity. In these countries the fruit are grown by families on smallholdings as their only source of livelihood, and these small enterprises are unable to compete with the vast banana plantations that can produce a cheap product which was marketed aggressively on a massive scale.

The United States Government was itself under especial pressure yet again from its American banana barons who, although growing bananas (still by methods damaging to the environment and the local communities) in Latin America outside United States' territory, paid large contributions to political parties within the United States. The U.S. took the dispute to the World Trade Organization for arbitration (which no doubt had to be based on the tenets of the earlier GATT arguments) and, when Europe made no change in their arrangements, America threatened trade sanctions on selected, unrelated European luxury goods eg. cashmere sweaters, chandeliers in turn threatening the future for many of those European companies unassociated with the banana industry.

Although a compromise for the banana industry was ultimately achieved, extension of this example drew attention to other multi-national commercial enterprises eg. hormone-treated beef, genetically modified maize *Zea* and other crops, and the possibility that they too might attempt to impose their products on markets that were rejecting them by threatening the introduction of trade sanctions on unrelated goods and/or services – thus undermining the GATT agreements and their laudable aim to eliminate threats of trade

wars. The banana could now stand as a symbolic reminder of the dangers of over-powerful international bodies for many years to come.

Banana plants are as vulnerable to the ravages of pests or disease as any other crop, particularly if their commercial cultivation is dominated by, in this case, a single parented, sterile plant with as authorities point out no genetic diversity or the cushion provided by wild gene 'banks'. Comparisons come to mind with the experiences of 'one-crop economies' mentioned under other plants such as tea *Camellia sinensis*, grape-vine *Vitis vinifera* or coffee *Coffea*. Records show that for some long time it was a cultivated variety of banana called 'Gros Michel' or 'Big Mike' which dominated the worldwide market until the 1950s. In that decade this was obliterated by a fungus known as 'Panama disease' or 'Fusarium wilt'. That banana variety however was successfully succeeded by a cultivated variety of this species called 'Dwarf Cavendish'. But in 2003 it seems that history began to repeat itself. The industry had already recognised that the continued existence of Cavendish bananas was being threatened now not only by a fungal disease referred to as 'Black sigatoka' but also from growing attacks by the earlier invader Panama disease as well. This continues to pose a severe threat to the economies of many countries which depend significantly upon both banana and plantain *Musa x paradisiaca* crops (the latter would be in the same boat) and media reports since early 2003 do nothing to allay such fears.

Despite this severe threat however botanists point out that there are over a thousand banana species in the wild - granted, not necessarily a direct alternative to the cloned Cavendish. The banana industry has never built up a genetic 'blood' bank from the many wild species or a plant breeding programme to support the extremely vulnerable, massive cloned Cavendish banana crop unlike most other large crops such as coffee *Coffea* or tea *Camellia sinensis*. Botanists and other scientists point to research, already well advanced, in finding an alternative plant and trials in Cuba on a possible successor are not only showing increased yields but significant reductions in the use of chemical sprays. Apparently commercial growers had reached the point of applying chemicals to their Cavendish crops as much as 40 times a year.)

In banana-growing areas the leaves are used locally to wrap food. They also provide a convenient and disposable plate and have occasionally been employed as cigarette tubes or papers too.

The young flower heads are cooked and eaten as a vegetable in Malaysia and Sri Lanka. The raw ripe fruit are not only eaten locally, but are also dried, ground into flour and mixed with wheat *Triticum* flour. In Africa, particularly in the East, their juice is brewed for beer and in the West Indies it has been used to make a type of cider. In turn this 'cider' can be distilled for spirits.

Ash from the dried and burnt fruit skins has been used to make soap, and it has also provided a manure. Fibre can be extracted from the leaf bases (or stem) and the flower stems – and in the Philippines a light material is woven from it and made up into shirts and dresses. One authority notes that banana juice or pulp can stain material.

Some authorities have recorded that local use of the fruit much as one would toss a coin or pick off the petals of a daisy. The faithfulness of a boyfriend would be assessed from the tip of the finger-like fruit. This is cut off and if its fleshy centre reveals a 'Y' shape (for 'yes') all is well as he is deemed to be true – whereas a dark blob (for 'no') is damning.

Although banana has been grown in southern China since about 200, when it is believed it first reached that Country, it seems that the fruit maintained an exotic, rare status there until the 20th Century. In China today banana plants participate in an extremely important environmental programme promoted by the United Nations and sometimes referred to as 'bio-mass conversion'. This in part uses up waste organic material as an alternative to

conventional fuel and aims at achieving a self-sufficiency in the production of energy. Whereas in other countries there can be a large plant residue from that country's farming methods, Chinese agricultural practice (which has changed little over thousands of years) has been particularly efficient and for this programme the banana leaves are being used there as one of the energy sources.

A hand of bananas is depicted in the coat of arms for Fiji and a banana plant appears in that for Dominica.

A fascinating observation is that in the whole of Europe only Iceland grows bananas commercially – on geyser-heated soil.

Medicinally, locally the banana root has been used to treat worms. Juice from the leaves has been taken internally to treat dysentery and as an antidote for snake bites.