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Banana definition pdf

(Definition of a banana from the Cambridge Dictionary of an advanced student and thesaurus © of the University of Cambridge) This article is about bananas in general. For the genus to which banana plants belong, see starch bananas used in cooking, see Cooking Banana. For other purposes, see Banana (disambiguation). Edible Fruit Banana Peeled, Whole, and longitudinal section Scientific Classification Kingdom: Plantae (unranked): Angiosperms (non-rating): Monocots (non-rating): Commelinids Order: Family of Singiberales: Musaceae Genus: Musa Fruit from four different varieties of banana banana elongated, edible fruit - botanical berries In some countries bananas used for cooking, can be called bananas Fruits are changeable in size, color and hardness, but are usually elongated and curved, with soft flesh rich in starch, covered with peel that can be green, yellow, red, purple or brown when ripe. Fruits grow in clusters hanging from the top of the plant. Almost all modern edible seedless (parthenocarp) bananas come from two wild species - Musa acuminata and Musa balbisiana. The scientific names of the most cultivated bananas are Musa acuminata, Musa balbisiana, and Musa th paradisiaca for hybrid Musa acuminata m. balbisiana, depending on their genomic constitution. The old scientific name of this hybrid, Musa sapientum, is no longer used. The species of mouse are native to tropical Indomalaya and Australia, and have probably been first domesticated in Papua New Guinea. They are grown in 135 countries, mainly for their own fruits, and to a lesser extent for the production of fiber, banana wine and banana beer, as well as as ornamental plants. The world's largest banana producers in 2017 were India and China, which together account for about 38% of total production. There is no clear distinction between bananas and bananas around the world. Especially in America and Europe, banana usually refers to soft, sweet, dessert bananas, especially from the Cavendish Group, which are the main exports of banana-growing countries. On the contrary, Musa varieties with firmer, starchy fruits are called bananas. In other regions, such as southeast Asia, many other types of bananas are grown and eaten, so binary distinction is not useful and is not done in local languages. The term banana is also used as a generic name for plants that produce fruit. This can also be extended to other members of the Musa genus, such as the scarlet banana (Musa coccinea), pink banana (Musa velutina) and Fe'i bananas. It can also refer to Ensete, such as a snow banana (Ensete glaucum) and an economically important false banana (Ensete ventricosum). Both genes are in the family, Musasei. Description of banana feed, about 25 cm (10 inches) through female flowers have petals on the tip of banana tree ovary, showing fruit and inflorescence Banana tree with the opening of the inflorescence of Banana inflorescence, partially discovered wild banana with flowers and stem grows in reverse Extracted strands of banana DNA that can be seen by the naked eye Of the Young Banana Plant All overground parts of the banana plant grow out of the structure commonly called feed. Plants tend to be tall and quite sturdy, and are often mistaken for trees, but what appears to be a trunk is actually a false stem or pseudostem. Bananas grow in a wide variety of soils, as long as the soil has a depth of at least 60 centimeters, has good drainage and is not compacted. The leaves of banana plants consist of a stem (petiola) and a blade (lamin). The base of the petiola expands to form a shell; The tightly packed shells make up the pseudostem, which is all that supports the plant. The edges of the shell are found when it is first produced, making it tubular. As new growth occurs in the center of the pseudostem the edges are forced apart. Cultivated banana plants vary in height depending on the variety and conditions of cultivation. Most are about 5m (16ft) tall, with a range of dwarf Cavendish plants about 3m (10ft) to Gros Michel at 7m (23ft) or more. The leaves are arranged in a spiral and can grow 2.7 meters (8.9 feet) long and 60 cm (2.0 feet) wide. They are easily torn by the wind, which leads to a familiar look. When the banana plant matures, the feed stops producing new leaves and begins to form a flower thorn or inflorescence. The stem develops, which grows inside the pseudo-stem, insets immature inflorescences until eventually it appears at the top. Each pseudo-system usually produces one inflorescence, also known as the banana heart. (More are sometimes produced; an exceptional factory in the Philippines produces five. After the fruit, pseudostem dies, but the offshoots are normally developed from the base, TAK NOC plant is generally perennial. and this means that tiny petals and other parts of the flower appear on the tip of the ovary. Banana fruits develop from a banana heart, in a large hanging cluster, consists of tiers (so-called hands), from up to 20 fruits to a tier. The hanging cluster is known as a ligament, 3-20 tiers, or commercially as a banana stalk, and can weigh 30-50 kilograms (66-110 pounds). Individual banana fruits (usually known as banana or finger) average 125 grams (4 1/2 ounces), of which approximately 75% water and 25% dry matter (nutrient table, in the lower right). The fruit was described as a leather berry. There is a protective outer layer (skin or skin) with numerous long thin strings (floeem beams) that run along between the skin and the edible inner part. The inside of the overall yellow dessert variety can be divided along into three sections that correspond to the inside of the three carp's manual deformation of undiscovered fruit. In cultivated varieties, seeds are reduced almost to non-existence; their remnants of tiny black specks in the interior of the fruit. Banana equivalent dose of radiation Like all living things on Earth containing potassium bananas emit radioactivity at very low levels occurring naturally from potassium-40 (40K or K-40), which is one of several potassium isotopes. The banana equivalent dose of radiation was developed in 1995 as a simple training tool to inform the public about the natural, small amount of K-40 radiation that occurs in each person and in conventional food. The K-40 in a banana emits about 15 bekkerels or 0.1 micro-siverts (units of exposure to radioactivity), a amount that does not add to the total body radiation dose when a banana is consumed. This is due to the fact that radiation exposure from the consumption of a single banana is only 1% of the average daily exposure to radiation, which is 50 times less than a typical dental X-ray, and 400 times less than on a commercial flight in the United States. The etymology of the word banana is believed to be of West African origin, possibly from the Wolof word banaana, and has switched to English through Spanish or Portuguese. The Musa 'Nendran' taxonomium, widely grown in the Indian state of Kerala, is a member of the AAB cultivar Banana Plants, Mahamaya Lake, Chittagong, Bangladesh Rod Musa was founded by Carl Linnaeus in 1753. The name can be derived from Antony Musa, the physician of Emperor Augustus, or Linnaeus may have adapted the Arabic word for banana, mauz. The old biological name Musa sapientum and Muse of the wise originated from homophony in Latin with classical muses. Musa is in the Musaseev family. The APG III system assigns Musaceae to the custom of Cingiberales, part of the commelinid hoards of monoco-eiledon flowering plants. As of January 2013, the World List of Selected Plant Families has been recognized by approximately 70 species of mousse; Some produce edible fruit, while others are grown as decorative elements. The classification of cultivated bananas has long been problematic for taxonomists. Linnea Linnea placed bananas in two kinds based only on their use as food: Musa sapientum for dessert bananas and Musa paradisiaca for bananas. More species names have been added, but this approach has not been sufficient for the number of varieties in the primary diversity centre, Southeast Asia. Many of these varieties were given names that were later discovered as synonyms. In a series of papers published in 1947, Ernest Chisman testified that Musa Sapientum Linnea and Musa Paradisia were varieties and descendants of two wild species producing seeds, Musa Akuminata and Musa Balbisyan, both first described by Luigi Aloysius Colla. The Chisman recommended abolishing the Linnaeus species in favor of reclassifying bananas in accordance with three morphologically different groups of varieties - those that primarily demonstrate the botanical characteristics of Musa balbisyan, those that basically demonstrate the botanical characteristics of Musa acuminata, and those with characteristics of both. Researchers Norman Simmonds and Ken Shepherd proposed a genome-based nomenclature system in 1955. This system has eliminated almost all the difficulties and inconsistencies of the previous classification of bananas, based on the appropriation of scientific names to cultivated varieties. Despite this, the original names are still recognized by some authorities, leading to confusion. The accepted scientific names for most groups of cultivated bananas are Musa Akuminata Coll and Musa Balbisyan Coll for ancestors, and Musa th Paradisiaca L. for the hybrid M. acuminata and M. balbisiana. M. Yu's synonyms include a variety of subspecies and grade names M. and Raiziaki, including M. p. subsp. sapientum (L.) Kuntze Musa and dacca Horan. Musa and Sapidisiak K.K.Jacob, nom. Musa and sapientum L., and many of his varietal names, including M. and sapientum var. paradisiaca (L.) Baker, nom. illeg. As a rule, modern classifications of banana varieties follow the simmonds and Shepherd system. Cultivaters are placed in groups

depending on the number of chromosomes they have and what species they are derived from. Thus, the banana Latundan is placed in the group AAB, showing that it is a triploid, obtained from both M. acuminata (A) and M. balbisiana (B). In 2012, a group of scientists announced that they had achieved a project to sequence the Genome of Musa acuminata. Bananas and bananas in regions such as North America and Europe, Musa fruits offered for sale, can be divided into bananas and bananas based on their intended use as food. Thus, the producer and distributor of chiquita bananas produces advertising material for the American market, which says that banana is not a banana. The stated difference is that bananas are more starchy and Sweet, They eat cooked, not raw; They have thicker skin that can be green, yellow or black; and they can be used at any stage of maturity. Linnaeus made the same distinction between bananas and bananas when he first named the two species of Musa. Members of the plan subgroup of banana varieties, most important as food in West Africa and Latin America, match Chiquita's description with long pointy fruits. They are described by Ploetz et al. as true bananas, unlike other bananas for cooking. East African culinary bananas belong to another group, the bananas of the East African Highlands, so will not qualify as true bananas in this definition. Cavendish bananas are the most common dessert bananas sold alternative approach of dividing bananas to dessert bananas and cooking bananas, with bananas being one of the subgroups cooking bananas. Triploid cultivars derived exclusively from M. acuminata are examples of dessert bananas, while triploid varieties derived from the hybrid between M. acuminata and M. balbiosa (in particular, subgroup according to the AAB group plan) are plans. Small farmers in Colombia grow a much wider range of varieties than large commercial plantations. A study of these varieties showed that they could be placed in at least three groups based on their characteristics: dessert bananas, non-plantain cooking bananas, and bananas, although there were overlaps between dessert and banana cooking. According to Valmayor et al., in southeast Asia, the center of the diversity of bananas, both wild and cultivated, the distinction between bananas and bananas does not work. Many bananas are used both raw and cooked. There are starchy cooking bananas that are smaller than those that eat raw. The range of colors, sizes and shapes is much wider than in those grown or sold in Africa, Europe or America. The languages of South-East Asia make no distinction between bananas and bananas, which are made in English (and Spanish). Thus, like the Cavendish variety, the classic yellow dessert bananas, and the Saba varieties, used mainly for cooking, are called pisang in Malaysia and Indonesia, kluai in Thailand and chuoi in Vietnam. Fairy bananas, grown and eaten in the Pacific islands, come from completely different wild species than traditional bananas and bananas. Most Fe'i bananas are cooked, but carat bananas, which are short and squat with bright red skins, are very different from the usual yellow dessert bananas, eaten raw. Thus, in trade in Europe and America (though not in small-scale cultivation) it is possible to distinguish between bananas eaten raw, and bananas that are cooked. In other parts of the world, particularly India, Asia and the Pacific Islands, the Oceans, more types of banana and the best difference is not useful and is not done in local languages. Bananas are one of the many types of making bananas that are not always different from dessert bananas. Historic cultivation Early cultivation See also: Musa acuminata, domesticated plants and animals of Austronesia, and East African bananas Highland Original native ridges of ancestors of modern edible bananas. Musa akuminata is shown in green, and Musa Balbisian in orange. The earliest domestication of bananas (Musa spp.) was originally from the natural parthenoary (no seeds) of Musa acuminata banksii in New Guinea. They were cultivated by Papuans before the arrival of Austronesian speakers. Numerous banana phytoliths have been extracted from the Cook Swamp archaeological site and date from about 10,000 to 6,500 BP. From New Guinea, cultivated bananas spread west to the island of south-east Asia through proximity (no migration). They hybridized with another (perhaps independently domesticated) subspecies of Musa Akuminata, as well as Musa Balbisian in the Philippines, northern New Guinea and possibly Halmhacer. These hybridization events produced tripoid varieties of bananas commonly grown today. From the islands of southeast Asia, they became part of the major cultures of the Austronesian peoples and were spread during their travels and ancient maritime trade routes to Oceania, East Africa, South Asia and Indochina. The wild-type bananas have many large solid seeds. The chronological dispersal of the Austronesian peoples through the Indo-Pacific region led to a banana subgroup now known as true bananas, which include east African highland bananas and Pacific bananas (holin and MaoPi-Populu subgroups). Bananas in the East African Highlands originated from banana populations introduced to Madagascar, probably from the region between Java, Borneo and New Guinea; while Pacific bananas were introduced to the Pacific islands from eastern New Guinea or the Bismarck archipelago. Phytolyite discoveries in Cameroon dating back to the first millennium BC have sparked an as-yet unresolved debate about the date of the first cultivation in Africa. There is linguistic evidence that bananas were known in Madagascar around that time. The earliest preliminary evidence indicates that cultivation does not date back to the late 6th century AD, however, it is likely that bananas were delivered at least to Madagascar, if not to East African shores during the Malagasy colonization phase of the island from south-east Asia around 400 AD. However, there is evidence that bananas were known to the Indus Valley civilization extracted from the archaeological sites of Cote Digi in Pakistan (although they are not available in other modern sites in South Asia). This may be a possible sign of a very early dispersal of bananas by Austronesian merchants by sea since 2000 BC But it is still you might think, since they may have come from the local wild species of Musa, used for fiber or as ornamental rather than food. In the region of primary banana diversity, south-east Asia remains. Secondary diversity is found in Africa, reflecting a long history of banana cultivation in these regions. The actual and likely distribution of bananas during the caliphate (700-1500 AD) banana may also have been present in isolated places in other parts of the Middle East on the eve of Islam. The spread of Islam was followed by a far-reaching spread. There are many references to it in Islamic texts (such as verses and hadiths) dating back to the 9th century. By the 10th century, a banana appeared in texts from Palestine and Egypt. From there it dissipated in North Africa and Muslim Iberia. In the Middle Ages, bananas from Granada were considered among the best in the Arab world. In 650, Islamic conquerors brought a banana to Palestine. Today, banana consumption increases significantly in Islamic countries during Ramadan, the month of fasting. Bananas were certainly grown in the Christian Kingdom of Cyprus in the late Middle Ages. Writing in 1458, the Italian traveler and writer Gabriele Capodilittza wrote sympathetically about the extensive agricultural production of the estates in Episcopi, near present-day Limassol, including the banana plantations of the region. Illustration of a fruit and banana plant from Acta Eruditorum, 1734 Bananas were introduced to America by Portuguese sailors who brought fruit from West Africa in the 16th century. Many species of wild bananas as well as varieties exist in unusual diversity in India, China and Southeast Asia. There are fuzzy bananas whose skins chewing gum pink; green-and-white striped bananas with the flesh of orange sorbet; bananas, which, when cooked, taste like strawberries. The Double Mahoi plant can produce two ligaments at once. The Chinese name for the fragrant banana Go San Heong means You can smell from the next mountain. Fingers on one banana plant merge: Another produces bundles of thousands of fingers, each just an inch long. - Mike Kind, New Yorker, Plantation Growers in the Caribbean, Central and South America Home Article: A History of Modern Banana Plantations in America In the 15th and 16th centuries, Portuguese colonists began banana plantations in the Atlantic Islands, Brazil and West Africa. The north Africans began to consume bananas on a small scale at very high prices soon after the Civil War, although it was only in the 1880s that food became more Back in the Victorian era bananas were not widely known in Europe, although they were available. Jules Verne presents bananas to his readers with a detailed description in Around the World in Eighty Days (1872). The earliest modern plantations originated in Jamaica and the associated Western Caribbean, including much of Central America. It included a combination of modern steamship and railway transport networks with the development of refrigeration equipment, allowing more time between cleaning and maturation. North American shippers such as Lorenzo Dow Baker and Andrew Preston, founders of the Boston Fruit Company began this process in the 1870s, but railroad builders such as Little K. Keith also participated, eventually culminating in multinational giant corporations like today Chiquita Brands International and Dole. These companies were monopolistic, vertically integrated (meaning they controlled growth, processing, shipping and marketing) and usually used political manipulation to build economies of enclaves (economies that were internally self-sufficient, virtually tax-exempt, and export-oriented, which contribute very little to the host country's economy). Their political manoeuvres, which led to the term Banana Republic for states such as Honduras and Guatemala, included working with local elites and their rivalry to influence politics or play the international interests of the United States, especially during the Cold War, to maintain a political climate conducive to their interests. Peasant cultivation for export in the Caribbean main article: The history of the production of peasant bananas in America The vast majority of bananas in the world today are grown for family consumption or for sale in local markets. India is a world leader in this type of production, but many other Asian and African countries where climate and soil conditions allow cultivation also host a large population of banana producers who sell at least part of their crop. However, peasant banana producers produce bananas for the global market in the Caribbean. Windward islands are characterized by growth, mainly Cavendish bananas, for the international market, usually in Europe, but also in North America. In the Caribbean, and especially in Dominica, where this type of cultivation is widespread, stocks are in the range of 1-2 acres. In many cases, the farmer earns extra money from other crops, at work outside the farm and on a portion of the earnings of relatives living abroad. Banana crops are vulnerable to high winds such as tropical storms or cyclones. Modern cultivation of all widely cultivated bananas today of two wild bananas Musa acuminata and Musa balbisiana. While the original wild bananas contained large seeds, diploid or polyploid varieties (some of which are hybrids) with tiny seed seeds preferably for consumption of raw fruit by man. They spread asexually from the branches. The plant is allowed to make two escapes at a time; more for immediate fruit and smaller sucker or follower to produce fruit in 6-8 months. Like the unseasonal harvest, bananas are available fresh all year round. Cavendish Home article: Cavendish bananas Cavendish bananas are the main commercial varieties of bananas sold on the world market. In world trade in 2009, by far the most important varieties belonged to the triploid AAA group Musa acuminata, commonly referred to as the Cavendish Group of Bananas. They account for most of the export of bananas, despite the fact that they were born only in 1836. The cultivator dwarf Cavendish and Grand Nain (Chiquita Banana) gained popularity in the 1950s after a previous mass cultivator, Gros Michel (also a cultivar of the AAA group), became commercially untouchable due to a Panamanian disease caused by the fungus Fusarium oxysporum, which attacks the roots of a banana plant. Cavendish varieties are resistant to Panamanian disease, but in 2013 there were fears that black sigatoka fungus would in turn make Cavendish bananas untouchable. Although it is no longer viable for large-scale cultivation, Gros Michel is not extinct and is still grown in areas where Panamanian disease has not been found. In addition, the dwarf Cavendish and Grand Nain are not endangered, but they can leave supermarket shelves if the disease makes it impossible to supply to the world market. It is unclear whether any existing variety can replace Cavendish bananas, so various hybridization and genetic engineering programs are trying to create a disease-resistant, mass banana market. One such strain that has arisen is Taiwanese Cavendish, also known as Formosana. Ripe export bananas are harvested in green and ripen in special rooms upon arrival in the country of destination. These rooms are airtight and filled with ethylene gas to cause maturation. Bright yellow color consumers usually associate with the supermarket bananas, in fact, caused by an artificial maturation process. The taste and texture are also affected by the ripening temperature. Bananas are cooled to 13.5-15 degrees Celsius (56.3 and 59.0 degrees Fahrenheit) during transportation. At lower temperatures, maturation has stalled and bananas are fun as cell walls break down. The skin of ripe bananas quickly blackened at 4 degrees Celsius (39 degrees Fahrenheit) the environment of the domestic refrigerator, although the fruit inside remains intact. Ripe bananas (left, under sunlight) fluoresce in blue when exposed to UV radiation. Bananas can be ordered from the retailer non-carbonated (i.e. not processed with ethylene), and Appear in the supermarket completely green. Guineos verdes (green bananas) that have not been carbonated will never fully ripen before becoming rotten. Instead of fresh fresh These bananas can be used for cooking as seen from Jamaican cuisine. A 2008 study showed that ripe bananas are fluorescent when exposed to ultraviolet light. This property is associated with the degradation of chlorophyll, which leads to the accumulation of fluorescent product in the skin of the fetus. The product of chlorophyll decay is stabilized by a group of propionate esters. Banana-plant leaves also fluoresce in the same way. Green (under-ripen) bananas are not fluoresce. This article suggested that this fluorescence could be used for optical vivo monitoring of maturation and over-ripening of bananas and other fruits. Bananas for storage and transportation must be transported over long distances from the tropics to world markets. To get the maximum shelf life, the harvest comes before the fruit matures. Fruits require careful processing, quick transportation to ports, cooling and chilled delivery. The goal is to prevent bananas from producing their natural maturation agent, ethylene. This technology allows storage and transportation for 3-4 weeks at 13 degrees Celsius (55 degrees Fahrenheit). Upon arrival, bananas are held at a rate of about 17 degrees Celsius (63 degrees Fahrenheit) and are processed with a low concentration of ethylene. After a few days the fruit begins to mature and is distributed for final sale. Ripe bananas can be spent a few days at home. If the bananas are too green, they can be put in a brown paper bag with an apple or tomato overnight to speed up the ripening process. Carbon dioxide (which produces bananas) and ethylene shock absorbers prolong the life of the fruit even at high temperatures. This effect can be used by packing a banana into a plastic bag and including an ethylene shock absorber, such as potassium permanga than potassium, on an inert medium. The bag is then sealed with a strip or rope. This treatment has been shown to more than double life expectancy to 3-4 weeks without the need for cooling. The sustainable use of fertilizers often left on abandoned plantations greatly contributes to eutrophication in local streams and lakes and harms aquatic life after algae blooms, depriving fish of oxygen. Sixty per cent of the coral reefs along the Costa Rican coast have been shown to be partially destroyed by sediment from banana plantations. Another problem is deforestation associated with increased banana production. As monocultures rapidly deplete soil nutrients, plantations expand into areas with rich soils and deforestation, which also affects soil erosion and degradation, as well as increases the frequency of flooding. The World Wildlife Fund (WWF) said banana production produces more waste than any other agricultural mostly from discarded banana factories, bags used to cover bananas, strings to tie them, and shipping containers. Manufacturing and Export: See or edit the original data. Annual banana production, measured in tons per year. production in 2017 (in Bananas Total India 30.5 30.5 China 11.2 11.2 Phiippines 6.1 3.1 9.2 Colombia 3.8 3.6 7.4 Indonesia 7.2 7.2 Ecuador 6.3 0.8 8 6.3 4 Indonesia 7.2 7.2 Ecuador 6.3 0.8 8 8 7.4 Indonesia 7.2 7.2 Ecuador 6.3 0.8 8 0.8 8 7.1 Brazil 6.7 6.7 Cameroon 1.3 4.5 5.8 Democratic Republic of Congo 0.3 4.8 5.1 Angola 4.3 4.3 Guatemala 3.9 0.4 4.3 Ghana 0.1 4.1 4.3 Guatemala 3.9 0.4 4.3 Ghana 0.1 4.1 4.3 1.4 4.3 Tanzania 3.5 0.6 4.1 Uganda 0.6 3.3 3.9 Nigeria 3.2 3.2 Costa Rica 2.6 0.1 2.7 Peru 3.0 2.0 2.3 Mexico 2.2 2.2 Dominican Republic 1.2 1.0 2.2 Vietnam 2.1 2.1 World 113.9 39.2 153.1 Source: FAOSTAT United Nations thus, it is necessary to make comparisons using the total number of bananas and bananas combined. In 2017, the world production of bananas and bananas together amounted to 153 million tons, led by India and China for a total of 27.1% of world production. Other major producers were the Philippines, Colombia, Indonesia, Ecuador and Brazil. As of 2013, the total world export amounted to 20 million tons of bananas and 859,000 tons of bananas. Ecuador and the Philippines were the leading exporters with 5.4 and 3.3 million tons, respectively, and the Dominican Republic was the leading exporter of bananas with 210,350 tons. Bananas and bananas and bananas in developing countries are a major food crop for millions of people in developing countries. In many tropical countries, green (immature) bananas used for cooking are the main varieties. Most producers are small farmers, either for domestic consumption or for local markets. Because bananas and bananas produce fruit all year round, they provide a valuable source of food during the hunger season (when food from one annual/semi-annual harvest is consumed, and the next is yet to come). Bananas and bananas are essential to global food security. Pests, Diseases and Natural Disasters Home article: A list of banana and banana disease banana bundles are sometimes enclosed in plastic bags for protection. The bags can be covered with pesticides. Although there is no danger of direct extinction, the most common edible banana variety, Cavendish (extremely popular in Europe and America), may become untouchable for large-scale cultivation in the next 10-20 years. His predecessor, Gros Michel, discovered in the 1820s, suffered this fate. Like almost all bananas, Cavendish has no genetic diversity, making it vulnerable to disease, threatening both commercial cultivation and small-scale subsistence farming. Some commentators have noted that the options that could replace what much of the world considers a typical banana are so different that most people do not consider them to be the same fruit, and blame the decline of banana on monogenetic cultivation driven by short-term commercial motives. Panama Panamanian disease is caused by soil fungus fusarium (Race 1), which enters the plants through the roots and travels with water into the trunk and leaves, producing gels and gums that cut off the flow of water and nutrients, causing the plant to wither, and exposing the rest of the plant to a lethal amount of sunlight. Until 1960, almost all commercial banana production was focused on Gros Michel, which was highly receptive. Cavendish was chosen as Gros Michel's replacement because, among the sustainable varieties, he produces the highest quality fruit. However, more care is required to deliver Cavendish, and his quality compared to Gros Michel is discussed. According to current sources, the deadly form of Panamanian disease infects Cavendish. All plants are genetically identical, which prevents the evolution of disease resistance. Researchers are studying hundreds of wild varieties for resistance. Tropical Race 4 Tropical Race 4 (TR4), an active strain of Panamanian disease, was first discovered in 1993. This virulent form of fusarium destroyed Cavendish in several Southeast Asian countries and spread to Australia and India. Since mushrooms on the soil can be easily found on boots, clothing or tools, withering has spread to America, despite years of preventive efforts. Cavendish is very susceptible to TR4, and over time Cavendish is threatened by the commercial production of this disease. The only known protection of TR4 is genetic resistance. This is awarded to either RGA2, a gene isolated from tr4-resistant diploid banana, or nematode-derived Ced9. Experts are citing the need to enrich banana biodiversity by producing new varieties of bananas, rather than just focusing on Cavendish. Black sigatoka Black sigatoka is a fungal leaf spot disease first observed in Fiji in 1963 or 1964. Black Shigatoka (also known as a strip of black leaves) has spread to banana plantations throughout the tropics from infested banana leaves that have been used as packaging material. It affects all the main cultivars of bananas and bananas (including Cavendish cultivators,70), a fun photosynthesis of blackening of leaves, eventually killing the entire leaf. Hungry for energy, fruit production drops by 50% or more, and bananas that grow ripen prematurely, making them unfit for export. The fungus has shown increasing resistance to treatment, with the current cost of treating 1 hectare (2.5 acres) exceeding \$1,000 a year. In addition to the costs, the question arises as to how long intensive spraying can be environmentally justified. Banana bunchy top virus Banana bunchy top virus (BBTV) is a plant virus of the genus Babuvirus, a family of Nanoviridae affecting Musa spp. including banana, abaca, banana and ornamental bananas) and ensete spp. in the Musaceae family. Banana beam of top disease disease Symptoms include dark green strips of variable length in the veins of leaves, midribs and petiole. The leaves become short and slowed down as the disease progresses, becoming bunched on top of the plant. Infected plants cannot produce any fruit or a heap can't get out of pseudosteach. The virus is transmitted by banana aphids Pentalonina nigronervosa and is widespread in Southeast Asia, Asia, the Philippines, Taiwan, Oceania and parts of Africa. There is no cure for BBTD, but it can be effectively controlled by eradicating diseased plants and using virus-free planting material. No sustainable varieties were found, but there were differences in susceptibility. Cavendish's commercially important subgroup was severely affected. Banana bacterial withering banana bacterial withering (BBW) is a bacterial disease called Xanthomonas campestris pv. Musacearum. After being initially identified by a close relative of bananas, Ensete ventricosum, in Ethiopia in the 1960s, BBW occurred in Uganda in 2001, affecting all banana varieties. Since then, BBW has been diagnosed in Central and East Africa, including banana regions of Rwanda, the Democratic Republic of the Congo, Tanzania, Kenya, Burundi and Uganda. Conservation Taking into account the narrow spectrum of genetic diversity present in bananas, and numerous threats through biotic (pests and diseases) and abiotic (e.g. drought) stress, the preservation of the entire spectrum of banana genetic resources continues. Banana germ plasma is preserved in many national and regional gene banks, as well as in the world's largest collection of bananas, the Musa Germplasm International Transit Center (ITC), managed by Bioversity International and organized at KU Leuven in Belgium. The varieties of mousse usually do not have seeds, and their long-term preservation is limited by the vegetative nature of the reproductive system of the plant. Consequently, they are preserved by three main methods: in vivo (planted in field collections), in vitro (like plants in test tubes in a controlled environment) and cryopreservation (meristems preserved in liquid nitrogen at 196 degrees Celsius). Genes of wild banana species are conserved by both DNA and cryopreserved pollen, and seeds of wild bananas are also preserved, albeit less frequently, as they are difficult to regenerate. In addition, bananas and their wild crop relatives are canned locally (in wild natural habitats where they have evolved and continue to do so). Diversity also persists in farm fields, where continuous cultivation, adaptation and improvement of varieties are often carried out by small farmers, cultivating traditional local varieties. Cold banana collection room at Bioversity International Musa Germplasm Transit Centre Bananas, raw (daily Value)/Food value per 100 g (89 kcal) Carbohydrates22.84 gSugars12.23 gDitar fiber2.6 g Fat 0.33 g Protein1.09 g Vitamins % DV-Tiamin (B1)3% 0.031 mgRiboflavin (B2)6% 0.073 mgNiacin (B3)4% 0.665 mgPantotenic acid (B5)7% 0.334 mgVitamin B631% 0.4 mgFolate (B9)5% 20gCholine2% 9.8 mgVitamin C10% 8.7 mg Minerals quantii %DVIron2% 0.26 mgMagnes 8% 27 mgManganese13% 0.27 mgPotassium8% 358 mgSodium0% 1 mgCink2% 0.15 mg Other components quantivited74 The reference to usDA Login values in the database are edible units of mcg portions roughly approximated, using U.S. adult recommendations. Source: USDA Nutrient Database Raw Bananas (not including peel) 75% water, 23% carbohydrates, 1% protein, and contain little fat. The 100-gram reference serving contains 89 calories, 31% of the U.S. daily daily cost (DV) of vitamin B6 and moderate amounts of vitamin C, manganese and dietary fiber without other micronutrients in significant content (see table). Potassium Although bananas are generally thought to contain exceptional potassium content, their actual potassium content is not high on a typical serving of food, having only 8% of the recommended U.S. daily cost of potassium (considered low DV, see diet table), and their potassium-content rating among fruits, vegetables, legumes and many other foods is relatively moderate. Vegetables with higher potassium content, raw dessert bananas (358 mg per 100 gm), include raw spinach (558 mg per 100 g), baked skinless potatoes (391 mg per 1 gm), cooked soybeans (539 mg per 100 gm), grilled portabella mushrooms (437 mg per 100 gm) and processed tomato sauces (413-439 mg per 100 g). Raw bananas contain 499 mg of potassium per 100 grams. Dehydrated dessert bananas or banana powder contain 1491 mg of potassium per 100 g. Allergens with latex allergies may experience a reaction to bananas. Culture Food and Cooking See also: Culinary Banana and Banana Banana List Fruit Bananas are the main starch for many tropical populations. Depending on the variety and ripeness, the pulp can vary in taste from starchy to sweet, and the texture from solid to soft. Both the skin and the inside can be eaten raw or cooked. The main component of the aroma of fresh bananas is isoamine acetate (also known as banana oil), which, along with a number of other compounds such as bottled acetate and isobutyl acetate, is a significant contributor to banana taste. During maturation, bananas produce gas ethylene, which acts as a plant hormone and indirectly affects the taste. Among other things, ethylene stimulates the formation of amylase, an enzyme that breaks down starch on sugar, affecting the taste of bananas. Greener, less ripe bananas higher levels of starch and therefore have a starchy taste. On the other hand, yellow bananas taste sweeter because of higher sugar concentrations. In addition, ethylene signals the production of pectinase, an enzyme that breaks down pectin between banana cells, causing the banana to soften as it matures. Bananas are deep-fried, deep-fried, baked in the skin in split bamboo or soared in sticky rice wrapped in a banana leaf. Bananas can be turned into canned fruit. Banana pancakes are popular with travelers in South Asia and Southeast Asia. This prompted the expression banana pancake trail for those places in Asia that cater to these travelers. Banana chips are an appetizer made from sliced dehydrated or fried banana or banana, which have a dark brown color and an intense banana flavor. Dried bananas are also ground to make banana flour. The juice extraction is difficult, because when a banana is compressed it simply turns into pulp. Bananas are prominent in Philippine cuisine, being part of traditional dishes and desserts such as maruya, turon, and halo-halo or saba-con-elo. Most of these dishes use Saba Banana or Kardaba banana varieties. Bananas are also widely used in a kitchen in the southern Indian state of Kerala, where they are steamed (puzhungiyathu), made in curry, fried in chips, (uppen) or fried in dough (pazhampori). Pisang goreng, bananas fried with dough similar to Filipino maru or kerala pazhampori, is a popular dessert in Malaysia, Singapore and Indonesia. A similar dish is known in the United Kingdom and the United States as banana fritters. Bananas are used in a variety of stews and curries or cooked, baked or mashed in much the same way as potatoes such as the pazham pachadi dish cooked in Kerala. Banana with lemon curry made at a house in Vijayawad, Andhra Pradesh, IndiaKilawin on pus'ng saging, a Filipino dish using banana flowersNicaraguan Nacatamales, in banana leaves, ready to steam Kaeng yuak is a northern Thai curry, made with the kernel of banana plantPisang goreng fried banana, covered with dough, a popular appetizer in IndonesiaBanana in a sweet sauce known as pengat pisang in Malaysia , raw or steamed with sauces or cooked in soups, curries and fried foods. The taste is reminiscent of artichoke. Like artichokes, both the meaty part of bracts and the heart are edible. Leaves Main Article: Banana Leaf Leaf Banana Leaf Banana Plant Banana Leaves are large, flexible and waterproof. They are often used as environmentally friendly disposable food containers or as stoves in south Asia and a number of Southeast Asian countries. In Indonesian cuisine, banana leaf is used methods of cooking such as pepe and packets of banana leaves containing food ingredients and spices are steamed or boiled or fried on coals. When used so for steam or grill, banana leaves protect the food ingredients from burning and add a subtle sweet taste. In southern India, it is customary to serve traditional food on a banana leaf. In Tamil Nadu, India, dried banana leaves are used for food packaging and for the production of cups for liquid food. The Tender Core stem of the banana plant is also used in South Asian and Southeast Asian cuisine. Examples include Burmese dish mohinga, and Philippine dish inubaran. Fiber Textile Banana Fiber collected from pseudostems and leaf plant has been used for textiles in Asia since at least the 13th century. Both fruit-bearing and fibrous varieties of banana plant were used. In Japan's Kijoka-bashufu system, leaves and shoots are periodically cut from the plant to ensure softness. Collected shoots are first boiled in a lilt to prepare the fibers for the manufacture of yarn. These banana shoots produce fibers of varying degrees of softness, yielding to yarn and textiles with different qualities for specific purposes. For example, the outer fibers of the shoots are the roughest, and are suitable for tablecloths, while the softest secret fibers are desirable for kimono and kamishimo. This traditional Japanese fabric manufacturing process requires many steps, everything is done by hand. India has developed a banana fiber separator machine that takes agricultural waste from local banana crops and extracts fiber filaps. Paper Main article: Banana paper Banana fiber is used in the production of banana paper. Banana paper is made of two different parts: the bark of a banana plant, mainly used for artistic purposes, or from the fibers of the stem and unimmum fruit. The paper is either handmade or industrial process. The cultural roles of Coconut, Banana and Banana Leaves are used during the worship of the Kaveri River in Tiruchirappalli, India.Banana flowers and leaves are for sale at the Thanin Market in Chiang Mai, Thailand. The Art of Song Yes! We Have No Bananas was written by Frank Silver and Irving Cohn and originally released in 1923; For many decades, it was the best-selling note in history. Since then, the song has been re-recorded several times and has been particularly popular during the lack of bananas. The man, gliding on a banana peel, has been a staple of physical comedy for generations. American comedy recording from 1910 features a popular character of the time, Uncle Jody, claiming to describe his own such incident: Now I don't think much of a person who throws a banana peeling on the sidewalk, and I don't think much of the banana peel that throws On the sidewalk neither ... my foot got into the bananer peelin' and I climbed in air and I went down the ker-plunk, jist, as I was pickin' myself before the little boy come runnin' across the street... He says: Oh, sir, could you do this agin? My little brother didn't see you doing it. The poet Basho is named after the Japanese word for banana factory. Basho, planted in his garden by a grateful pupil, became a source of inspiration for his poetry, as well as a symbol of his life and home. The cover of The Velvet Underground's debut album features Andy Warhol's banana. On the original vinyl version of the LP, the design allowed the listener to peel this banana to find a pink, peeled phallic banana on the inside. Italian artist Maurizio Cattelan created a concept art called Comedian, including sticking a banana to the wall with silver duct tape. The piece was exhibited briefly at Art Basel in Miami before being removed from the exhibition and eaten without permission in another artistic stunt called Hungry Artist 135 by New York artist David Datuna. The religion and popular beliefs of Nang Thani, the female ghost of Thai folklore that haunts banana plants in India, bananas are prominent in many festivals and cases of Hindus. In South Indian weddings, especially Tamil weddings, banana trees are held in pairs to form an arch as a blessing for a couple for a long, useful time. It is believed that in Thailand a certain type of banana plant may be inhabited by the spirit, Nang Thani, a type of ghost associated with trees and similar plants, which manifests itself as a young woman. Often people associate the length of colored satin tissue around the pseudo-stem of banana plants. In Malay folklore, the ghost, known as Pontianak, is associated with banana plants (pokok pisang), and its spirit is said to be in them during the day. Racist symbol There is a long racist history describing people of African descent as more like monkeys than humans, and because of the assumption in popular culture that monkeys like bananas, bananas were used in symbolic acts of hatred. In Europe in particular, bananas have long been often thrown at black footballers by racist spectators. In April 2014, during a match at Villarreal in El Madrigal, Dani Alves was targeted by Villarreal fan David Campay Lio, who threw a banana at him. Alves took a banana, brushing it and snacking, and the meme went viral on social media in support of him. Racist taunts are a constant problem in football. Bananas were hung on hinges around the Campus of American University in May 2017 after the student corps elected its first black woman as student government president. Banana is also an insult directed at some Asian people who are said to be yellow outside, white inside. mainly in east or southeast Asia Asia other East-Southeast Asians or Asian Americans who are perceived as assimilated into mainstream American culture. Unicode Standard Unicode includes the U'1F34C emoji symbol 🍌 BANANA (HTML #127820). Other uses of large leaves can be used as umbrellas. In 2007, banana peel powder was tested as a means of filtering heavy metals and radionuclides originating in water produced by the nuclear industry and fertilizers (the cadmium pollutant is present in phosphates). When added and thoroughly mixed for 40 minutes, the powder can remove approximately 65% heavy metals and this can be repeated. Waste bananas can be used to feed livestock. Cm. also domesticated plants and animals of Australia's List of Banana Dishes United Brands Company v Commission of European Communities Links to B Banana from The Fruits of warm climate Julia Morton. 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