

## Food Fact Sheet

### Investigating and Researching New and Exotic Fruit

#### STAR FRUIT

The star fruit or carambola (*Averrhoa carambola*), is a unique, waxy, golden yellow to green fruit that has a 5 pointed star shape when cut across the middle of the fruit.

This fruit probably originated in Sri Lanka and the Moluccas, and have been cultivated in Southeast Asia and Malaysia for several hundred years. There are 2 varieties found in markets, one very sour and the other slightly sweet. Their flavor has been described as a cross between an apple and a grape. It is almost impossible to tell the sweet and tart varieties apart, but in general the sweet varieties have thicker, fleshier ribs. There are several white varieties, all of which are sweet.



Star fruit bruise easily, so handle with care. It (the sweet variety) can be eaten out of hand or sliced and used as a garnish or in salads. They are also used in chutney, curries and tarts. The juice can be used in tropical drinks and smoothies.

Other names for the fruit are *belimbing* or *belimbing manis* (Indonesia) and *madun* (Thailand), Chinese star fruit and Five angled fruit.

#### KIWI FRUIT



What's in a name? Kiwi fruit (*Actinidia chinensis*) were called Yangtao in China, their country of origin, renamed Chinese gooseberry when they were introduced to New Zealand in 1906, and finally named kiwi fruit when imported into the U.S. market in the early 1960s. The French call it *souris végétales*, 'vegetable mice'.

There are more than 400 different varieties of kiwi fruit in China where they have been used for over 700 years.

Kiwi fruit can be medium or small in size, although most are small. They are brown and fuzzy on the outside and bright green on the inside with tiny black seeds. The shell or skin of the fruit can be eaten or peeled. Kiwi fruit is a member of the botanical family Actinidia and there are 400 different varieties. Kiwi fruit vines are trained to grow on a trellis, and vines can be as high as 15 feet. This helps plants get enough light and air for optimal fruit quality. The fruit hangs down along the sides, like table grapes. The Hayward variety is the most popular U.S. variety. The flavor is a mixture of peaches, strawberries, and melon with a soft and juicy texture. It's one of the most popular fruits today. Kiwi fruit is high in antioxidant vitamin C and a good source of fiber, vitamin E and potassium. It is fat free, sodium free and cholesterol free.

Did you know kiwi fruit could also be used as a natural meat tenderizer? That's because kiwifruit contains an enzyme called Actinidin. Just cut in half and rub kiwi fruit over the meat, or peel and mash with a fork then spread it on the surface of the meat and let stand for 10 to 15 minutes or longer. The enzyme Actinidin also breaks down protein in dairy products. That's why when kiwi fruit is combined with low fat ice cream, yogurt, or sour cream, it's best to serve and eat it right away.

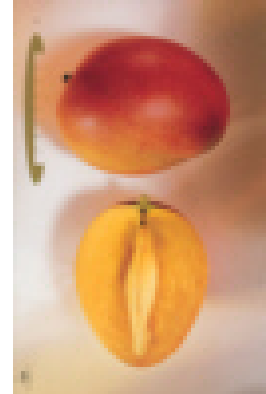
## MANGO

Mangos have been cultivated in India for about 5,000 years, and were originally small, fibrous fruits, somewhat like plums, with a taste like turpentine. There are now over 500 varieties grown there.

The mango (*Mangifera indica*) is a tropical Asian tree of the cashew family. They are now grown extensively throughout the tropics, and are sometimes known as 'the peach of the tropics.' The spice *amchoor* is made from dried, ground unripe mangoes.

More fresh mangos are eaten every day than any other fruit in the world.

The 'Paisley' design motif is a design from India based on the mango.



## PASSION FRUIT

Passion fruit is an egg-shaped tropical fruit that is also called a purple granadilla. The passion fruit has a brittle, wrinkled purple-brown rind enclosing flesh-covered seeds, something like a pomegranate (granadilla means "little pomegranate" in Spanish). The seeds are edible so you can eat the orange pulp straight from the shell. Passion fruit is more commonly sieved and its highly aromatic pulp and juice are used as a flavoring for beverages and sauces. The pulp has an intense aromatic flavor, while the texture is jelly-like and watery. The flavor is likened to guava.



## PAPAYA

The exact origination of papaya is unknown but it is believed to be native to southern Mexico and neighboring Central America. The papaya is a melon like fruit with yellow-orange flesh enclosed in a thin skin that varies in color from green to orange to rose.

The papaya tree can grow from seed to a 20 foot, fruit bearing tree in less than 18 months. The fruit can range in size from 1 to 20 pounds.

The white powder sold as "Meat Tenderizer" is composed mainly of an enzyme extract from the papaya, called papain, usually with added salt, sugar and anti-caking agents. The enzyme papain, breaks down tough meat fibers. Papaya juice



has been used for centuries in South America to tenderize meat.

Varieties - There are two types of papayas, the Hawaiian and Mexican. The Hawaiian varieties also known as Solo papayas, are found most often in supermarkets. These fruits are pear shaped, weigh about a pound each, and have yellow skin when ripe. The flesh is bright orange or pinkish, depending on the variety. The Mexican varieties are not as common but can be found in Latino supermarkets. Mexican papayas are much larger than the Hawaiian types and can weigh up to 20 pounds and be more than 15 inches long.

Although the flavor is less intense than the Hawaiian varieties, they are still delicious and enjoyable.

## UGLIFRUIT

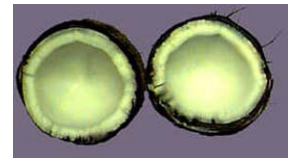


This Jamaican fruit is a cross between a grapefruit and a mandarin orange. It is about the size of a smallish grapefruit but is sweeter. The American pronunciation is "ugly" - pretty much describing its appearance. In the US it is better known as a crossword answer [clue - tropical citrus fruit] than as a bona fide member of the citrus clan.

'Ugli fruit' is a trademark name for this fruit that originated in Jamaica, most likely as a natural hybrid. It supposedly originated near Brown's Town in 1914, and was cultivated by F. G. Sharp at Trout Hall, and marketed by his son in the early 1930s.

## COCONUT

The coconut most likely originated somewhere around New Guinea in the Pacific Ocean, but long ago became distributed throughout the Pacific from Southeast Asia to Africa. It may have reached the Pacific coast of Central or South America before Columbus reached America, but was introduced to the Caribbean from Africa by Europeans.



**NOTE:** There are some botanists who believe that the coconut originated in the American tropics. There is no definitive proof for either origin.

Coconut oil was the world's leading vegetable oil until soybean oil took over in the 1960s.

There are more than 20 billion coconuts produced each year. Coconut juice or coconut water is the liquid inside a coconut.



Coconut milk is produced by steeping grated coconut in hot water then straining. Coconut cream is coconut milk cooked down until it thickens, or grated coconut steeped in hot milk instead of water. One cup of unsweetened shredded coconut has about 25 grams fat and 280 calories.

## PINEAPPLES



Pineapples most likely originated in Brazil, but there are no known native or wild pineapples known today. They are probably a cultivated species that developed under conditions of artificial selection.

More than one-third of the world's commercial supply of pineapples comes from Hawaii.

Pineapples can weigh up to 20 pounds.

## JICAMA

Jicama is the edible starchy, tuberous root of a South American vine of the morning glory family. It is also called yam bean and Mexican turnip.

Jicama looks like a turnip, and tastes like a cross between an apple and a water chestnut, with a delightful crunchy texture. Jicama may be used raw in salads (they make an excellent 'cole slaw'), or may be baked, boiled, mashed, or fried like potatoes. Eat only the tuberous root, as other parts of the plant may be poisonous.



## KUMQUAT



The kumquat is a tiny orange/yellow, football-shaped fruit native to Eastern Asia, and closely related to citrus fruits. (Kumquats were originally considered *Citrus*, but in 1915 were given their own genus, *Fortunella*). They are unusual in that the edible skin is sweet and the flesh is quite tart, and the combination leaves a pleasant citrus

taste in the mouth.

Kumquats are eaten whole, candied, pickled, and used to make relishes, preserves and marmalades. There are also hybrids produced with limes, oranges and other citrus fruit, known by names such as limequat, orangequat, citrangequat, etc.

## YAMS

True yams may have been cultivated as early as 8,000 B.C. in Asia.

What are frequently called yams, especially in the Southern U.S., are in fact sweet potatoes. The two are not related, even though they look similar and are used in pretty much the same way.



Despite a physical similarity and a frequent confusion with their names, yams and sweet potatoes are not even distantly related. They are in two different botanical families. Yams are actually related to grasses and lilies.

Estrogens (sex hormones) were first made from a similar compound in yams. Yams were used commercially to produce hormones for contraceptive pills, and steroids.

At one time, growing yams to be used in drug production (steroids, oral contraceptives, sex hormones) was a major industry in Mexico, providing 80% of the raw material for production of steroidal drugs.

The water yam commonly cultivated in Southeast Asia, grows up to 8 feet long and can weigh over 100 pounds.

One species of yam is used to make a dye in southern China. Many wild species of yam contain the poisonous dioscorines, but when peeled and boiled or roasted they are said to be safe to eat. There are about 600 species of yam, 150 of which are cultivated for food.

Yams can grow to huge sizes, and on the Pacific Island of Ponape, yams are referred to as 2 man, 4 man, or 6 man yams, depending on how many men it takes to lift the tuber. Some have been accurately recorded up to 600 pounds and 6 feet in length.

The annual world production of yams is over 30 million tons.

The yamaimo root or mountain yam, is a Japanese variety of yam, once reserved only for the Japanese nobility.

## COUSCOUS

Couscous is the most famous part of North African cuisine. The term comes from Berber languages, where it is called *seksou*. It consists of small grains of which semolina is the main ingredient. It is used as the main ingredient in many dishes in much the same way as if it was rice (which it resembles, by the way).

Couscous is made in the homes, often with many women gathered together, and formed in the hand. It is made from 2 parts of semolina, 1 part of flour, salt and water. Some handfuls of semolina are put on a plate or on the ground, after which it is watered with salty water. This is baked in the hand, while flour is added. Gradually small "grains" of couscous are separated. After doing this process until the right size of the "grain" is achieved, a bit of oil is added. Then the couscous is ready to be used in dishes. Here meat and vegetables are added. In Tunisia, harissa is added to the couscous, making it hot, and red in color.



Modern times have made households make up large quantities of couscous, which is preserved dry and can be used over a period of several weeks.

University of Arkansas, United States Department of Agriculture, County Governments Cooperating

The Arkansas Cooperative Extension Service offers its Programs to all eligible persons regardless of race, color, national origin, religion, gender, age, disability, marital or veteran status, or any other legally protected status, and is an Equal Opportunity Employer.