

Getting to Know  
the Edible Plants at  
Sundari Farm & Gardens



**SUNDARI**  
FARM & GARDENS

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# Agave

**Family:** Agavaceae

**Botanical Name:** *Agava americana*



## DESCRIPTION

Agave plants are often grown for decorative purposes but the *Agave americana* has many uses. Food, drink, and fiber are also obtained from these beautiful plants. Most people think agave is part of the cactus or aloe families while it is actually a succulent related to the lily family.

Agave plants have sharp, pointed leaves that may or may not have spines on the tips or along the edges. The leaves tend to be rigid and like most succulents may store liquid.

The *americana* variety is often called the Century Plant as the plant only blooms when it is extremely healthy and vigorous with perfect conditions. This can often mean decades between flowers. When it does bloom, a single shaft or stem emerges from the center rosette. It may

reach heights up to 25 feet where it produces bunches of large yellow flowers. When done flowering, the plant will die, leaving suckers or offshoots at the plant's base to carry on.

## FOOD USE

Agave is poisonous when eaten raw as it does contain a toxin. The sweet sap is most likely the most well-known part of the agave plant. This is due in part to the fact that the syrup made from it is fermented and then turned into mescal or the infamous tequila from Mexico. The heart is often baked or roasted along with the stalk which is eaten like asparagus. The seeds can be ground into a flour for baking and thickening soups or stocks.

Humans are not the only ones who use the agave plants as a food source. Several species of butterflies are known to lay eggs on the plants which then provides food for the larvae. Along with the butterflies, bats enjoy the nectar from the flowers and help with pollination.

## MEDICINAL USES

The different parts of the plant are used for various things, depending on the geographical area. Central Americans have long used the sap to grind powders for use in wound poultices due to its purported bacterial and antiseptic properties.

Taken internally, the sap is said to treat and soothe all manners of digestive issues. These might include diarrhea, dysentery, indigestion, constipation, and other ailments of the stomach and intestines. A gum to treat toothache is made from the sap and roots.

## OTHER USES

Depending on the variety, many of the agave plant parts have found uses in other areas. The leaves and stalks have been found to have saponins. When chopped up and boiled, the plant releases the saponins which are then used to make a type of soap. Some varieties produce fibers that can be used for rope, heavy fabrics, and paper. The thorns from these versatile plants can even be turned into crude pins and needles.



# Aloe

**Family:** Aloaceae

**Botanical Name:** *Aloe barbadensis*



## DESCRIPTION

Aloe vera has been used by humans for various skin ailments and issues for centuries. There is even evidence that the ancient Egyptians were using it over 6,000 years ago. There were stone carvings found depicting the aloe plant being given as funeral gifts to the pharaohs.

There are well over 200 types of aloe plant in the world with most of them originating in Africa. The plant has several common names including aloe, burn plant, elephant's gall, lily of the desert, plant of immortality, etc. The most common variety for home use is the *aloe barbadensis*.

The aloe plant can grow up to 4 feet tall with spiky leaves reaching almost 3 feet in length. The leaves are approximately 98% water with the other 2% being comprised of the substances that give aloe its healing properties.



## FOOD USES

Many studies are out there that contradict each other when it comes to ingesting aloe vera orally. While some claim it has properties to help with digestion, there are several notable institutions that recommend against using aloe vera for any type of internal remedy.

Most of the studies show that aloe can help with constipation as it has laxative qualities, but because it may cause cramps, it's not as popular a treatment as others. It is also possible for the use of aloe to create complications for diabetic patients. From most viewpoints, aloe vera's main benefit is for topical applications instead of nutritional or internal.

## MEDICINAL USES

Something that all of the studies are agreeing on is that aloe vera is an extremely effective and useful plant for topical relief treatments. It is most famous for being used as a treatment for burns and scrapes, but rashes and other skin ailments also benefit from the application of pure aloe vera gel.

Relief from insect bites or stings as well as skin reaction to irritants like poison ivy, nettles, and poison oak is another major reason to keep an aloe plant or two around. Used to coat the skin after a sunburn, it can help minimize some of the pain as well as some of the surface damage.

Using aloe vera is as simple as breaking off a piece of the plant and applying the cool, gel-like sap or substance that is stored in the leaves directly to your skin. The soothing sensation is felt immediately. It's not advised to apply to open cuts or sores due to the possibility of bacteria being present.

Aloe vera is being added to many beauty treatments as well as hair and skin products for its healing and soothing qualities.



# Apple Banana

**Family:** Musaceae

**Botanical Name:** *Musa sapientum* L.



## DESCRIPTION

Grown primarily as a backyard plant versus a commercial crop, *Musa manzano* is a banana plant that goes by a lot of names. Aside from the descriptive “apple banana”, it also answers to: latundan, ma, manzana, manzano, pisang raja sereh, pisang rastali, platano manzano, silk, sugar, and tundan banana. That’s a lot of ways to describe this unique plant.

Apple banana plants are popular for ornamental reasons as well as the tasty, dessert fruit they bear. They are a cold-resistant plant that is easy to grow in a variety of soils and climates. Reaching heights up to 15 feet or so depending upon their location, these plants are resistant to disease, insects, and wind.

The plant produces large green leaves that can reach a few feet in length and may or may not be tinged in red. The chubby fruit grows in large bunches just below the bases of the leaves.

## FOOD USES

Just as the name implies, the fruit from the apple banana tree tastes just like it sounds. The flavor is what one would imagine when combining a slightly acidic, tart apple with an extra-sweet banana. In order to get this pleasant taste though, the fruit must be allowed to fully ripen. This isn't a banana that is enjoyable when green.

As with most types of dessert bananas, the apple banana is best eaten fresh or raw. It is a popular addition to cold fruit salads and other dishes that don't require the fruit to be cooked. Unlike the cooking bananas or plantains, the dessert bananas are less starchy and will become mushy when heated.

The fruit from the apple banana plants do however make great additions to smoothies or ice cream treats and desserts. Their unique flavor gives a nutritious boost to these sweet treats.

## MEDICINAL USES

The health benefits derived from these bananas are no less than any others. A large dose of potassium, fiber, magnesium, and vitamins - especially B6 and C are in each fruit. The high iron content helps those who are suffering from anemia.

They are also prescribed as a natural remedy for patients who suffer from stomach complaints such as constipation and diarrhea. The ingredients in the banana help to soothe the stomach lining and help with digestion.

Athletes and dieters regularly eat a banana for the quick boost of energy and healthy sugars. Those with diabetes are cautioned to use moderation when eating this fruit though as overindulgence can lead to spikes in blood sugar.



# Basil

**Family:** Lamiaceae

**Botanical Name:** *Ocimum basilicum*



## DESCRIPTION

For a majority of the population, when you mention the herb basil, they will immediately think of pesto sauce. While large amounts of basil are indeed used to make delicious pesto, significant quantities are also used in herbal medicines and treatments.

Basil is one of the most popular and versatile herbs grown today - both commercially and in homes. Its ease of use combined with simple growing needs makes it a top choice for kitchens and backyards everywhere.

Originating in the tropical countries of Asia such as India and Iran, basil is a prized herb in cultures throughout the world. There are well over 50 varieties of basil with sweet, holy, and Thai basil being the most common and the easiest to recognize. The light-green leaved sweet basil is

the most popular for culinary uses as it has the mildest, sweetest flavor. It is reminiscent of sweet anise or cloves. It is also easy to grow from seed or obtain started plants all over the world.

## FOOD USES

Along with the popular pesto mentioned above, basil leaves are often added to salads and other cold dishes. It is amazing what a difference in flavor adding a few fresh basil leaves to a simple sandwich can make.

Basil is a welcome ingredient for many fish, meat, poultry, and vegetable dishes. Salads (including fruit), soups, stews, and egg dishes also benefit from the added zest from the basil leaves.

While sweet basil is used in many cooked dishes, it usually isn't added until the last minute as the heat seems to draw out and diffuse some of the oils that provide the flavor and health benefits to the basil leaves. The Thai variety of basil is designed to withstand high heats and is a better choice for cooking.

It is easy to dry and preserve your excess fresh basil leaves for future use by dehydrating them in a warm oven. They will store well for about six months.

In some Asian countries, a popular and flavorful drink is made from the basil seeds.

## MEDICINAL USES

Basil is known to have high levels of calcium, iron, magnesium, potassium, vitamins A & C, and zinc while also having no cholesterol.

The essential oils present in basil leaves contain powerful antibacterial and anti-inflammatory properties. It is said to help with rheumatoid arthritis pain and inflammation as well as helping to soothe the stomach and bowels.

A tea made from brewing basil leaves may help with nausea symptoms as well as possessing antibacterial properties. It may also have calming effects as there is no caffeine in basil.



# Black Sugarcane

**Family:** Poaceae

**Botanical Name:** *Saccharum officinarum* L. cv. *Badila*



## DESCRIPTION

During the late 1800s and into the early 1900s, Hawaii was home to over 100 varieties of sugarcane. The large plantations were full of hybrid sugarcane crops that were high-yield, easily harvested types of cane. When the black sugarcane or “Badila” variety appeared in the 1920s, the other varieties were already firmly established commercially so it never gained a foothold.

It did, however, gain the attention of smaller producers and gardeners. They could harvest the more tender canes by hand without using the crushing machinery the large producers did. Backyard enthusiasts prized it for its beautiful appearance and how easy it was to care for. Fortunately, this striking member of the *Saccharum* genus wasn't lost over time like so many of the other once popular varieties.

Sugarcane is a perennial grass that thrives in humid, tropical regions where temperatures range between 70-95 degrees Fahrenheit. It self-propagates via buds or “eyes” on the stalks that root themselves in the ground. A 2-4 pound stalk with 11 or 12 percent sugar content will take from 11-14 months to mature, depending upon the exact variety and growing conditions.

## FOOD USES

Sugarcane is classified into three distinct groups based on what they produce. As you can imagine, these are all based on the type of sugar product: chewing canes, crystal canes, or syrup canes. Black sugarcane tends to be predominantly a chewing cane.

Sugarcane for chewing is meant for a snack and not as a meal. Due to the extremely tough fibers of the cane, it is not advisable to swallow the sugarcane. It is to be chewed and then spit out or disposed of after the sweet sugary sap has been extracted.

Over 75% of the world’s sugar supply comes from sugarcane. Most of this is derived from the crystal cane varieties. Molasses is created from processing syrup sugarcane. Molasses is the main ingredient in rum as well as a more pure form of alcohol.

## OTHER USES

Due to their coarseness and ability to dissolve when mixed with water, sugarcane crystals are now added to many facial and body scrubs. Many other beauty treatments are also taking advantage of the benefits of the natural sugar crystals.

Many other uses have been found for sugarcane that aren’t directly related to their sugar content. Some of these include being used as a fertilizer when mixed with lime and other ingredients. It helps break up and provide nutrients to the soil. An alternative to fossil fuels, ethanol is made using sugarcane.

Biodegradable and compostable plastic-like material is now being manufactured from sugarcane. As it is an all-natural substance, it creates no waste and is low impact on the environment.



# Brazilian Spinach

**Family:** Amaranthaceae  
**Botanical Name:** *Alternanthera sissoo*



## DESCRIPTION

Brazilian spinach is a leafy, low-growing perennial that only reaches about a foot high when mature. It tends to form a mound instead of spreading out in a mat like many spinach varieties do. It does, however, send out creepers that allow it to self-propagate without being invasive.

Also known as Samba or Sambu lettuce or Sissoo spinach, this is an edible tropical ground cover that is valued for its crinkly leaves. It has several characteristics other than taste that make it a popular addition to most gardens. The fact that it will thrive and produce all year long once it is established make it a favorite over other spinach varieties.

While not picky about soil, this plant does prefer locations that provide shade at least half of the time. It will tolerate sunnier locations once it is firmly established, but it won't be as happy.



It is easy to harvest the spinach by simply removing the leaves at the nodes. Regular such pruning will keep the plant from flowering which will reduce or halt leaf production. The flowers are small white blooms that are fairly insignificant.

Growing this vigorous plant from cuttings is an easy way to multiply your plants. Plant cuttings that are approximately 6-8 inches long in moist ground that is shaded. A common way to shade the new cuttings for the first few weeks is to place a palm frond directly over the top of them. Keeping the ground moist without waterlogging it will help your cuttings to take hold quickly.

## FOOD USES

The fact that this spinach greens substitute doesn't get the common sliminess associated with cooked spinach makes it a popular choice in many gardens. Combine this with its distinct nutty taste and you'll want to plant some for yourself.

Nutritionally speaking, the Brazilian spinach is on par with regular varieties of the plant. It is packed full of vitamins and minerals while being low in calories and cholesterol. Anemics are encouraged to eat spinach regularly as the iron content is quite high and beneficial.

It is an easy plant to incorporate into your diet as it is versatile and can be eaten raw or cooked. Steaming and boiling the firm leaves is the most popular method to prepare it. It retains much of its crunchiness and texture even after cooking. Stir-frying is another great way to enjoy these greens. It can be added to any dish that might use spinach or other green vegetables. Adding it to scrambled eggs or quiche-type dishes ups the flavor and nutrition.

Some cultures advocate using the fresh, raw leaves in salads and added to sandwiches or other cold meals. There are some concerns about eating too much of it raw as there are excess oxalates in the leaves. Moderation as well as simply cooking it will reduce this concern.

## OTHER USES

Some gardeners use Brazilian spinach as a type of living mulch for use under their fruit trees. As it dies and decomposes it provides a nutritious and protective layer for the tree roots.



# Cacao

**Family:** Malvaceae

**Botanical Name:** *Theobroma cacao*



## DESCRIPTION

In case you're confused as most people are, cacao and cocoa are the same thing, almost. The cacao tree and bean pods are where the substance cocoa comes from. What matters is that whether you refer to cacao or cocoa, you're talking about the tree that gives us chocolate.

The beginnings of the world's love affair with chocolate goes back to at least 400 BC when the Olmecs in Mexico and Guatemala established the very first cacao plantations. Cacao also showed up in Mayan hieroglyphics and cave drawings. When explorers discovered this treasured crop, it didn't take long for word to spread and the cacao tree would be forever in demand.

Hawaii is the only place in the US that cacao is grown commercially. The demand for native chocolate is growing faster than the growers can keep up. Fortunately, cacao grows well here.

Growing up to 25 feet tall, the evergreen cacao tree is native to the lower levels of the rainforest where it enjoys shade from the big tree canopies. The shiny dark green leaves are leathery with an egg shape that comes to a point which lets moisture from trees above drip to the ground.

Produced all year long, the cacao flowers grow in clusters. The small blooms have a pale pink to whitish-yellow hue. When pollinated, the clusters develop into a reddish-brown, egg-shaped fruit called the cacao pod. This pod contains dozens of seeds commonly known as cacao beans.

## FOOD USES

Cacao, cocoa, or chocolate all come from the cacao plant. As such, cacao can be eaten and enjoyed in too many ways to list. Your taste and your quest for health benefits are the only things that limit how you can use cacao.

The amount of processing that cacao receives has a direct correlation to the nutritional benefit it provides. Whenever heat is applied, benefits and value are being lost. Organic, raw cacao has the highest nutritional value compared to any other forms as it is minimally processed at low temperatures. Milk chocolate is at the other end of the scale with the most amount of refining.

## MEDICINAL USES

The early explorers documented the medicinal uses ancient civilizations had for cacao. These included treatment for anemia, appetite, fatigue, fever, and gout. It was celebrated for relieving anxiety, boosting moods, and improving digestion.

Many of today's studies prove that ingredients in cacao trigger helpful enzymes and hormones in the body. These help to reduce effects of conditions such as mental fatigue, stress, depression, and premenstrual syndrome (PMS) as well as some of the ailments above.

## OTHER USES

The crushed shells of cacao beans are now being used as an alternative to peat moss for mulching gardens and fields. Because the natural peat bogs are becoming endangered due to overharvesting, this by-product of the chocolate industry makes a great substitute.



# Calamondin Lemon

**Family:** Rutaceae

**Botanical Name:** *Citrofortunella mitis*



## DESCRIPTION

Even though Calamondin trees can reach heights of up to 20 feet, this bushy evergreen citrus tree tends to stay on the shorter side. The thickly-leaved branches of this fruit tree start low to the ground where they bear a very cold-hardy fruit. A deep taproot helps to both nourish and stabilize the tree.

In the spring and summer months, extremely fragrant white or creamy-white blossoms appear to magically perfume the air. These delicate blooms will then develop into a small yellow or orange-colored fruit that grows to about an inch in diameter. Resembling a tangerine, the sweet and acidic fruit has several seedless segments. The calamondin fruit is best harvested by hand using scissors or clippers. Snipping the fruit from the stem instead of pulling or tearing will help keep damage to the tree to a minimum.

While it is prized for the tangy fruit, calamondin is also a popular choice as an ornamental tree. It grows well out in the garden or as a potted plant. Bonsai growers often choose the calamondin to grow as well. It prefers a sunny area but will tolerate living in the shade. It is also resistant to drought though it should be watered regularly and deeply in order to produce the best fruit.

## FOOD USES

Calamondin can be eaten cooked, juiced, preserved, and raw. When it is eaten raw, it is best to consume it soon after harvest. Refrigerating it will help prolong the freshness.

It is a versatile fruit that lends its flavor to all sorts of dishes and meals. Before limes gained favor, the acidic calamondins were cut into halves or quarters for use with beverages, seafood, and meat. The juice is prized for making acid beverages.

Whole fruits are often eaten with curry after being fried in coconut oil and various spices. The peel is used as a flavoring, candied, or preserved along with the fruit. Calamondin is an excellent fruit to use in chutney, marmalades, and preserves. A popular treat here in Hawaii is a marmalade of calamondin and papaya.

## MEDICINAL USES

There are many home remedies associated with calamondin. Rubbing the fruit juice onto the scalp after shampooing is said to eliminate dandruff and itching while promoting hair growth. The juice is also reported to bleach freckles, help clear up acne, and reduce the itching and irritation from insect bites. Drinking the juice is supposed to help with coughs and constipation.

The distilled oil from the calamondin leaves is believed to be a more potent carminative than even peppermint oil.



# Coffee

**Family:** Rubiaceae

**Botanical Name:** *Coffea arabica*



## DESCRIPTION

Mistakenly thought of as a tree because of the great heights (up to 30 feet) that it can reach, the *Coffea arabica* is actually a woody evergreen shrub from which we get the magical coffee bean. There are many varieties of coffee plants, but there are only two that are responsible for the majority of the coffee beans produced in the world - Arabica and Robusta.

Coffee plants are grown in both commercial and residential settings. They are both productive and ornamental, making great additions to gardens or even in pots on the patio (pruning keeps their height manageable). They boast shiny, waxy dark green leaves and delicate white flowers.

Coffee plants start producing fruit after four years. Sweetly fragrancd flowers appear which turn into fruit after pollination. It takes up to 35 weeks after pollination for fruit to develop and ripen.

Another benefit to growing large numbers of coffee plants is their ability to help with air quality. These amazing shrubs are one of the highest oxygen producing plants on the planet.

## FOOD USES

Coffee is the number one, go-to morning beverage of the world due in part to high caffeine content. The dried and roasted coffee beans or fruit are what give us that jolt of energy. Although uncommon, a tea can be made from the leaves of the plant as they too are high in caffeine.

Your imagination is the limit when it comes to coffee-flavored foods. Many desserts and treats are made with coffee and there are very few dishes that don't pair well with the beverage. Chocolate covered coffee beans are a popular snack item for both the taste and the caffeine boost.

## MEDICINAL USES

The medicinal benefits derived from coffee are a direct result of the caffeine content. Caffeine is proven to dilate blood vessels which helps with migraines and other headaches as well as angina. It can also act as a mild diuretic to ease the pain from premenstrual syndrome.

Current studies are showing promising results in coffee's effectiveness against certain cancers and liver disease. It may also help reduce the risks of both diabetes and Parkinson's disease.

## OTHER USES

Many species of butterflies and moths lay their eggs on coffee plants as their larvae depend upon it as a food source. Coffee is considered an investment as it is one of the most highly traded commodities in the world - second only to oil. It is becoming common to see coffee in many beauty treatments and soaps. The coarse texture of the grounds makes a great exfoliant.

We mentioned its oxygen production, but did you know ground coffee is also a great all-natural choice for an air freshener and for absorbing odors? Professional fragrance testers often keep a bowl of coffee beans or grounds on hand to clear their senses between scent samples.



# Cooking Banana

Family: Musaceae  
Botanical Name: *Musa sp.*



## DESCRIPTION

Cooking bananas (often interchanged with plantains) are usually not eaten raw even when ripe. (They are *always* cooked when unripe.) Unlike their dessert banana cousins, these fruits are much starchier and far lower in sugar. While the lower sugar content makes them less desirable as a sweet treat, that starchiness makes them an excellent choice for cooking. The starch keeps them from turning to mush when heated.

Depending upon the variety and growing conditions, cooking banana plants can be anywhere from 8 to 15 feet tall. Once they reach about 1 ½ years old, they will start to set fruit. They will actually produce fruit all year long, but they are more likely to be productive during warm weather. Bananas grow in bunches that hang down from the base of the leaf canopy.



## FOOD USES

Baking, boiling, frying, and steaming are all popular ways to prepare cooking bananas. They are often mashed and served by themselves or blended with other mashed root crops. Many dishes are flavored with the mashed bananas.

Drying banana chips has become a popular way to enjoy this fruit, especially on the go. The dried banana retains its flavor and preserves well. It is common to see the chips in trail mixes and other snack offerings.

The banana flower bud can also be eaten. It is often cooked and treated as a vegetable. The buds are full of nutrition similar to the the fruit and can easily be harvested without damaging the growing bananas.

While not eaten themselves, the banana leaves are regularly used in cooking, especially here in Hawaii. Depending upon the variety, the leaves can reach up to 9 feet long and 2 feet across. Each banana plant will grow anywhere from 8-12 of these big leaves.

Packets of food are placed in cleaned leaves and then allowed to steam or bake in earth ovens. The leaves are an economical and eco-friendly alternative to plastic wrap when making sandwiches for school. It is also an authentic, convenient, and hygienic way to package traditional goods for selling at the markets.

## MEDICINAL USES

All bananas have similar nutritional benefits. They provide large doses of beta-carotene, calcium, fiber, iron, potassium, niacin, riboflavin, and multiple vitamins including C and E.



# Dragon Fruit

**Family:** Cactaceae

**Botanical Name:** *Hylocereus undatus*



## DESCRIPTION

Dragon fruit is actually a nickname for a cactus plant called the pitaya. This unique climbing cactus from South America has several such nicknames: night-blooming cereus, pitahaya, strawberry pear, and here in Hawaii - papipi pua.

The fanciful name of “dragon fruit” is an appropriate companion to the unusual appearance of the interesting fruit. If one imagined a colorful dragon egg, this might be a close match to what it would look like. The fruit is covered in a leathery red or yellow skin that is somewhat similar to that of a pineapple or artichoke with its overlapping almost-spiky “leaves”. The inside of the fruit is white with edible black seeds.

Aside from the ornamental appeal and the taste of the sweet fruit, the dragon fruit plant is also prized for its unique and short-lived flowers. From June to October, small buds appear on the plant's stem margins. Within about seventeen days, the greenish buds will have grown to about 11 inches long.

Only during the evening or night hours, will the flower burst open with its inviting scent attracting nighttime pollinators such as bats and moths. Once pollination has occurred, the blossom closes up again and then dies, its job complete. After about thirty days of development, the fruit is then ready to be harvested.

## FOOD USES

One of dragon fruit's other names "strawberry pear" is a good indication of what the fruit tastes like. It has been compared to a blend of berry, kiwi, pear, and watermelon.

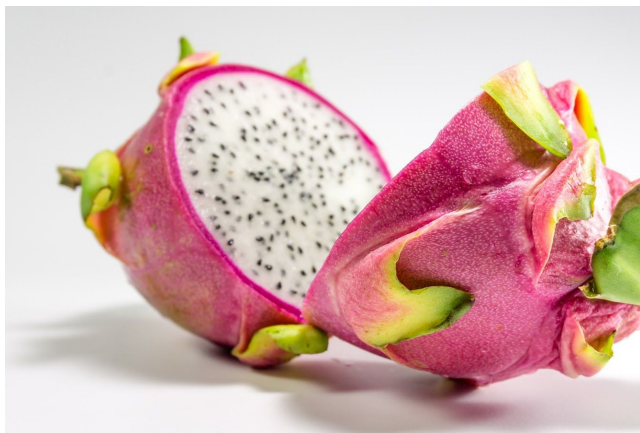
Eaten raw, dragon fruit is best enjoyed scooped out of the bitter, inedible skin or chopped into small, manageable pieces. The seeds are completely edible and add to the appearance of the fresh fruit. It is a great addition to a fruit salad or as an added burst of flavor in fresh green salads. Many people enjoy it as an ingredient in nutritious smoothies.

## MEDICINAL USES

Dragon fruit has a lot going for it when it comes to nutrition. It is packed full of antioxidants, B and C vitamins, calcium, captin, fiber, phosphorus, and protein to name just a few.

Studies have shown regular consumption to lower both blood pressure and blood sugar. It strengthens bones and teeth as well as shoring up the immune system. Bruises and wounds appear to heal faster and respiratory symptoms are lessened.

Due to the captin present in the fruit, heart and cardiovascular health also benefit from use. Lowered cholesterol is another welcome side-effect of eating dragon fruit. Diabetics do need to eat with caution as the natural fructose in this fruit can raise sugar levels in some patients.



# Edible Hibiscus

**Family:** Malvaceae

**Botanical Name:** *Abelmoschus manihot*



## DESCRIPTION

Not to be confused with the highly ornamental and decorative hibiscus, the *Abelmoschus manihot* is a perennial plant that is grown to be eaten. Even though it is called a hibiscus flower, this plant is closely related to the more widely known okra plant. It has several names including aibika, hibiscus manihot, and sunset hibiscus.

This quick-growing, hardy but frost-sensitive plant is right at home in tropical environments such as Hawaii's. It is not considered invasive but does naturalize easily. To keep it from taking over, many gardeners plant it either in pots or within the vegetable garden itself where it can be contained.

Edible hibiscus plants have large, 6-inch showy flowers which range from a creamy white to a lemon-drop yellow color. Each bloom has a maroon to purple center. These blooms can be eaten and are often added to salads or cooked like the leaves.

The important part of the plants are actually the leaves and tender shoots. The leaves tend to be palmate and grow to about 4 inches long. The actual shape, color, and taste may vary from plant to plant. These young leaves are the food source that the plant is prized for.

## FOOD USES

If you aren't a fan of okra, you most likely won't care for edible hibiscus either. The plants are from the same family and both have mucilaginous tendencies. This is what causes the "slimy" or viscous texture that many people don't like about okra.

The nutritional benefits from cooked *abelmoschus manihot* are numerous. When compared side-to-side with cooked spinach, the nutrients are almost doubled. Protein, vitamins A and C, fiber, iron, calcium, potassium, and several other minerals and vitamins are jam-packed into small servings of this leafy green.

Baking, cooking, and stir-frying are among the most popular methods of preparing this plant. The leaves can be steamed or chopped up and added to salads and egg dishes. Soups will also benefit from the addition of the tender shoots or leaves.

## MEDICINAL USES

Most of the reported medicinal uses of *abelmoschus manihot* are anecdotal or from folklore. These include things such as treatments for colds and sore throats as well as dysentery and diarrhea. Skin rashes and ailments are also said to benefit from applications of the plant leaves.

Some modern research has proven that the plant contains some antiviral properties. It has also been shown in laboratory studies to reduce bone loss in rats. Tests are underway to show the anticonvulsant and antidepressant uses in extracts from this plant.



# Fig

**Family:** Moraceae

**Botanical Name:** *Ficus carica* L.



## DESCRIPTION

Figs have been a part of civilization as far back as 5000 BC. Archaeological digs and excavations in Asia and the Mediterranean have produced remnants and references to this popular fruit.

Figs are not a good tree for small spaces as they can reach up to 50 feet tall if left alone. Their twisted muscular branches and far-wandering roots allow them to take over an area fairly quickly. They thrive in drier, warm climates with days full of sunshine and weekly deep waterings. They can be grown in large containers if desired as long as all of their needs are met and they are fertilized once a year. Regular pruning can keep them to a manageable size and shape.

The leaves on fig tree can grow to almost a foot long. They are a bright green with coarse hairs on the top and softer, downier hairs on the underside of the leaves. The flowers are actually not visible when the tree is in bloom as they grow in a cluster inside the fruit. Insects are drawn down

into the fruit in order to pollinate the flowers. Figs will bear two different crops in a year. The first crop is small, forming on the prior year's growth. The main or second crop is produced in the fall and is where the bulk of the produce will come from.

## FOOD USES

Figs are a versatile fruit as they are both sweet and a little bit nutty. Combined with the interesting texture, this makes a fruit that is perfect for both savory and sweet dishes. Some people compare the taste of a fig to a blending of a strawberry and a peach.

Figs are best when eaten fresh and ripe. Overripe figs spoil quickly and underripe figs have little to no taste. Raw is the best way to eat them, but they are also a great snack when dried.

Many ways of preserving fig are available such as jams, syrups, and preserves. An extremely popular cookie is made with this intriguing fruit. They can also be stewed or poached, but however you choose to prepare them, you're in for a treat.

## MEDICINAL USES

Historically figs have been used to treat a wide range of ailments. They are high in fiber, iron, and potassium which means they are great for constipation, anemia, and hypertension. They are also full of other vitamins and minerals which allows for use as treatments for diabetes and heart health. Figs are one of the most naturally alkaline fruits, useful in balancing out an acidic system.

The sap from figs is said to have antiviral properties. By allowing the sap from the fruit (or latex) to dry on the root of a wart, it can help cure them. There are also reports of people using the fruit sap to treat skin irritations and wounds.

Fig leaves or extracts made from the leaves have been shown to help reduce the insulin levels in diabetics. The opposite is also the case though with diabetics eating the fruit. Because it is a fruit with a high glycemic index, it should be eaten with something such as almonds, vegetables, or walnuts in order to level out the sugar absorption into the bloodstream.



# Garlic

**Family:** Alliaceae

**Botanical Name:** *Allium ampeloprasum*



## DESCRIPTION

Garlic is a popular cool season vegetable that is a member of the onion (*allium*) family. This perennial plant is grown as an annual and is used worldwide for both culinary and medicinal purposes.

Because garlic prefers to stay dry, requires a 14 hour day of sun, and benefits from a cold snap during development, it can prove to be a challenging plant to grow in Hawaii. It can be done however if the right variety is chosen and all of its requirements are met.

There are three types of garlic: softneck, stiffneck, and elephant garlic. The softneck varieties are those you will often find braided as their necks stay soft and malleable even after harvest. They are the most popular garlics and are also the hardiest. They store well and have a strong flavor.



The stiffneck is a milder tasting, more cold-hardy type garlic that has easy to peel cloves. Two of the more sought after stiffneck varieties include Rocambole and Purple-striped.

Elephant garlic is also known as great-head garlic. It is actually closer related to onions and leeks. It has a mild flavor and only grows 4-5 large cloves. It is also not as hardy as other types of garlic.

## FOOD USES

Every culture in the world has a use for garlic in their diet. Whether it is eaten raw, pickled, or cooked, there is not a cuisine on the planet that doesn't benefit from the addition of this amazing plant. It can be used as a seasoning, baked, added to salads or soups, even used as a flavoring for desserts such as ice cream. The uses are limitless.

Eating garlic cloves raw is the best way to reap the flavor, nutrition, and aroma benefits. Allicin is at its peak before the cloves are prepared in any way. As the garlic is heated, it will lose potency. When cooking, it is usually best to add the chopped garlic at the end, right before serving.

## MEDICINAL USES

A compound called allicin found in garlic is what makes this plant such a nutritional and medicinal powerhouse. When the garlic cloves are chopped, mashed, or chewed, the allicin (and the potent garlic smell) is released. Garlic is such an important "health food" that it has been made into supplements for those that don't care to or can't eat the fresh garlic.

Ancient civilizations recognized the antibacterial, antibiotic, antifungal, antiparasitic, and antiviral properties of this plant. It was used to treat infections, wounds, worm infestations, and virus attacks long before our laboratories confirmed these findings.

Reducing heart disease appears to be the number one benefit and use of consuming garlic. Studies prove that regular garlic use lowers LDL cholesterol and helps the liver reduce production of this bad cholesterol. Blood pressure has been shown to be lowered and garlic can help reduce the chance of blood clots. Current studies are finding that garlic may also be promising in treating rheumatoid arthritis as well as battling some cancers.



# Ginger

**Family:** Zingiberaceae

**Botanical Name:** *Zingiber officinale*



## DESCRIPTION

If you've ever had a ginger ale, some gingerbread, or gingersnap cookies, you've tasted this reed-like herb. Native to Asia, ginger root (*actually a rhizome*) has been used as both a cooking spice and a nausea treatment for over 4000 years. It has obviously proven its worth over time.

Ginger plants prefer warm, humid climates with rich, moist soil. It likes protection from the wind and does best with at least 5 hours of sunshine a day. It has done well here in Hawaii to the point of some varieties becoming an invasive species.

The plant is started from buds or nodes on the root or rhizome and can grow up to 2-3 feet tall. Ginger is harvested by digging up the entire plant. The prime time to do this is when the plant is between 8-10 months old.

## FOOD USES

The rhizome or knotty, twisted part of the root of the ginger plant is edible and can be grated, minced, shredded, and sliced. While it doesn't have to be peeled before preparation, most people do remove the skin to get to the flavorful flesh underneath it. Ginger root is full of long, stringy fibers so it is easiest to peel it by slicing in the same direction as the fibers run.

Ginger can be used in almost any kind of dish. It has a pungent and spicy-sweet flavor that adds to the taste of the food, whether it be a sweet or savory dish. Thinly sliced, pickled ginger is a must-have staple paired with wasabi for any sushi dishes at home or at a restaurant. Fresh ginger can last for several weeks stored in a sealed plastic bag in the refrigerator.

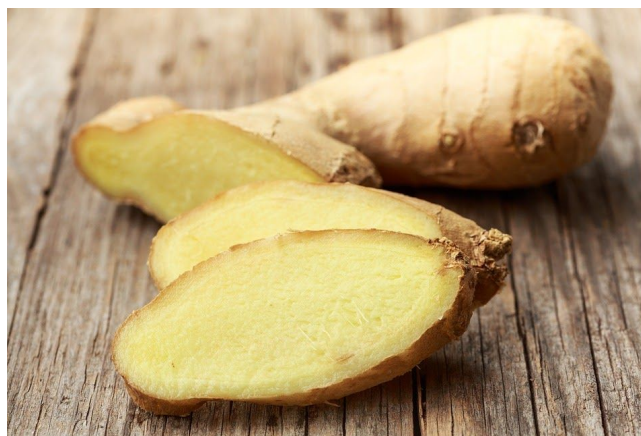
Preserving ginger is a popular way to enjoy it as it takes well to pickling, candying, and drying. When drying ginger be sure to cut it into small pieces as it will become extremely hard once the moisture is removed. Larger chunks can be enjoyed as a hard, rock candy.

It also makes a great addition to drinks and desserts when it has been soaked in an alcohol such as brandy or sherry. Curries, chutney, and jellies also benefit from ginger's burst of flavor. Fans of ginger root are now finding ways to ferment ginger to create their own versions of ginger ale and other nutritional carbonated beverages as well as alcoholic concoctions.

## MEDICINAL USES

Ginger has long been relied upon for stomach upsets, nausea (especially for pregnant women), and intestinal ailments. Cancer patients going through chemotherapy are often advised by their doctors to ingest ginger to help with the vomiting and nausea.

Studies are being conducted to determine the effectiveness of ginger in dealing with heart health, arthritis, and diabetes among other things. Ginger extracts, drops, and supplements are all becoming widely available as more benefits are being discovered.



# Green Onion

**Family:** Liliaceae

**Botanical Name:** *Allium fistulosum*



## DESCRIPTION

The term “green onion” can cause a lot of confusion when you’re trying to determine exactly which plant you are referring to. It answers to quite a few names with some being descriptive and others, not so much: bunching onion, green onion, long green onion. Japanese bunching onion, scallion, spring onion, and Welsh onion. For identification purposes, *Allium fistulosum* is the proper name for this member of the onion family that is grown and enjoyed all over the world.

The long bunching, small bulbed variety commonly found here on the islands most likely originated in Asia. Over the years, the farmers there cultivated this variety to produce a vigorous plant that would have strong, flavorful leaves. They also prized the plant’s ability to easily self-propagate.

The *Allium fistulosum* plants grow quickly from minuscule seeds and form small white bulbs that for the most part, are undeveloped. The long green stems that grow from the bulb are long and hollow. Many people confuse them with chives but they are completely different species. The plants can be harvested in whole at approximately 50-60 days from planting.

## FOOD USES

Green onions are most commonly eaten raw. Once they have been thoroughly washed, they are simply chopped into small pieces and then tossed onto salads, into soups, or added as a garnish or decoration. Many fans of these onions will eat them like a carrot and not chop them.

This versatile and tasty plant is an excellent addition to any stir-fry recipe. Another popular way of preparing green onions is to coat them with olive oil and then roast or grill them like asparagus. They can also be preserved or fermented similar to kimchi. Once they are chopped and dried, green onions in plastic freezer bags can last up to six months frozen.

## MEDICINAL USES

Green onions are full of healthy minerals, phytochemicals, and vitamins. Large amounts of vitamins A, B6, C, and K found in this plant contribute to better bone, eye, and heart health. The immune system also gets a boost when green onions are part of the diet. Other ingredients such as chromium, copper, fiber, potassium, and manganese contribute to these beneficial qualities.

Aside from the nutritional benefits of enjoying green onions, there are many other ways that these herbs have been found to be useful. One of these is as a natural antihistamine. Onions produce an antioxidant called quercetin which aids in suppressing substances that cause allergic reactions and symptoms. It also aids in reducing the effects of free-radicals which cause cancer.

This unassuming member of the allium family has shown to be a powerful anti-inflammatory as well as an aid in reducing blood pressure and lowering blood sugar levels in diabetics.



# Ice Cream Bean Tree

**Family:** Mimosaceae

**Botanical Name:** *Inga edulis* or *feuillei*



## DESCRIPTION

The fanciful and descriptive name of “ice cream bean tree” is just one of the many titles that this interesting tree goes by. Aside from the scientific names of either *Inga edulis* or *Inga feuillei*, it also answers to these monikers guama, *Inga cipo*, and pacay. Very few people will refer to it by anything other than ice cream bean.

The ice cream bean tree has been prized by humans for centuries. There is evidence of its value to ancient civilizations in Central and South America as pottery has been found with pictures of the fruit included. There is also proof that since pre-Columbian times, this tree has been associated with the cultivation of cacao and coffee trees for its shade-giving properties.

Several factors aside from the sweet fruit and immense amounts of shade have also contributed to the popularity of this tree. It is an extremely rapid growing tree that can easily reach 55 feet tall

and above. Unlike many other trees, the ice cream bean tree can take hard pruning on a regular basis. It also assists in maintaining the fertility of the soil as well as helping reduce damage and erosion from water.

## FOOD USES

The sugary sweet, edible white pulp of the ice cream bean tree's fruit is the primary reason this is such a popular tree. With a taste that is compared to vanilla ice cream, the pulp can be eaten fresh and raw or it is often used to flavor desserts and treats. Columbian Indians make a fermented alcoholic beverage called *cachiri* from it. It is so important to their society that they have a festival named to celebrate it.

## MEDICINAL USES

The *Inga* trees do have historical uses for medicine and various treatments. The plant has been used for easing headaches as well as curing diarrhea and dysentery. Astringents and lotions are made from a decoction of the bark and leaves to treat arthritis and stomach irritations.

## OTHER USES

In Central and South America, the ice cream bean trees are still grown primarily to shade the cacao, coffee, tea, and vanilla crops. They are also used in the cities and parks to help with cooling the cities and aiding in watershed preservation.

Many villages and areas grow the ice cream bean tree for its wood as well as fruit. Because of the fast reproduction tendencies and the fact that the trees need constant and continual pruning, they are a viable source for wood as a fuel.

The lumber from downed trees is not wasted and is put to use as beams inside homes as well as building timbers. It is believed that the wood is resistant to moisture rot and insect damage.



# Italian Oregano

**Family:** Lamiaceae

**Botanical Name:** *Origanum majoricum*



## DESCRIPTION

Italian oregano belongs to the mint family which makes it a cousin to a lot of popular, well-known family members such as basil, rosemary, sage, and thyme - just to name a few of the several thousand mint relatives. There is even a large number of oreganos to choose from in the group.

The first thing that pops into the minds of most people when the word “oregano” is spoken is “Italian”. This is understandable given the popularity and volume of Italian dishes that feature oregano. While this variety might be nicknamed the “pizza herb”, it is still a wonderful addition to food from other cultures including Greece, Mexico, and Spain.

This well-loved Mediterranean herb is easy to grow. It can be started from seed or even from cuttings. As with most herbs and plants from that region, it is a sun worshipper but it will tolerate some shade. It likes a light, well-drained soil and prefers less water than many herbs. Regular



pinching back and pruning of your oregano plant will encourage new growth and a bushier plant. This will also keep the plant from becoming leggy and spindly. Growing up to about 2 feet tall and wide, Italian oregano can make an attractive and fragrant groundcover that is mature and ready for harvesting at about 45 days.

## FOOD USES

Oregano is packed chock full of beneficial ingredients. Vitamins A, B6, C, E, and K all combine with calcium, fiber, folate, iron, magnesium, and potassium to provide a healthy boost to any diet. Aside from nutritional aspects, oregano also provides delightful taste to any dish it is added to.

Oregano leaves should be harvested right before the flowers bloom as the leaves will have the most flavor then. There is never a wrong time to pick the leaves, but early mornings tend to be optimum as the plant oils will still be high in the leaves and plant. If not used right away, it is easy to store and preserve oregano.

When cooking with fresh oregano, it is recommended to add it to the dish towards the end. It is thought that excess heat reduces the effectiveness of the herb. Chopped fresh oregano provides a healthy boost of flavor and nutrition to salads, soups, and pasta dishes among others. The fragrant seeds from the oregano plant are used to make a flavoring for drinks and desserts.

## MEDICINAL USES

There are many health-related benefits attributed to the use of oregano. It has been used as an antiseptic, antispasmodic, disinfectant, diuretic, expectorant, and stimulant. Aromatherapy is another area where oil of oregano is used on a regular basis, especially as an essential oil.

## OTHER USES

Toiletries such as hair products, perfumes, and soaps benefit from the addition of essential oil from Italian oregano. An interesting and eco-friendly use for this oil is the cleaning of beehives. By using this natural antiseptic disinfectant, the bees and the environment are being protected.



# Jabong

**Family:** Rutaceae

**Botanical Name:** *Citrus maxima*



## DESCRIPTION

The fruit from the jabong tree is often mistaken for a grapefruit when it is first encountered. This is an understandable impression as the trees are closely related - the jabong is an ancestor of the grapefruit tree. Another issue that causes confusion regarding this member of the citrus family is the wide range of names it is known by.

The official name for the tree is *Citrus maxima* (when you see the size of the fruit, you'll understand this jumbo designation). Other names that the tree goes by include bol look, Chinese grapefruit, jabong, pomelo, pomello, pummelo, and shaddock along with many others - depending on where you are in the world.

## FOOD USES

Jabong is most often eaten as a fresh fruit or as an ingredient in salads. At times the rind will also be used as a vegetable and cooked as such. The rind can be candied and eaten as a sweet treat. Juice may be extracted from the sweet pulp to be used in drinks and jellies.

While there may not be a large *variety* of nutrients in jabong fruit, there is a large *quantity* of those that are present. Vitamins B1, B2, B12 and C along with calcium and protein are found in abundance in each serving.

## MEDICINAL USES

The flowers, fruits, leaves, and seeds from the jabong tree have all found their way into treating various ailments. The fruit can be used to help lower the pH in blood, can be a purgative as well as having antibacterial and disinfecting properties.

Coughs, fevers, and gastric issues have also been known to benefit from the use of this tree. It is given as a calming agent or antispasmodic with a sedative effect for cases of chorea, convulsions, and epilepsy. A pectin can be derived from the rind of the fruit that is effective at treating skin issues such as burns and scrapes.

## OTHER USES

The large fruits, weighing up to several pounds, have a long shelf life which allows them to be stored as well as being used as an attractive and long-lasting decoration in some cultures. Byproducts from the plant are often used as fodder for cattle while the tree itself is a valuable source of food for honeybees.

The timber from the jabong tree is a hard, heavy wood that has a fine grain. It is a tough lumber that is useful for making tool handles and can double as a good firewood when needed.



# Jackfruit

**Family:** Moraceae

**Botanical Name:** *Artocarpus heterophyllus*



## DESCRIPTION

The jackfruit tree is an attractive and interesting tree that is believed to be a native of India. Through the centuries it has spread to Southeast Asia, the tropical regions of Africa, and the Philippines. According to various records, it was one of the earliest fruits to be cultivated. It is known to have been in Hawaii since at least the 1880s if not before.

An evergreen that easily reaches heights of 80 feet, the jackfruit tree produces fruit that averages around 35 pounds. There are many instances of immensely larger fruits occurring with a whopping 144-pound fruit being presented in India in 2010. The largest jackfruit in Hawaii weighed in at 79 pounds and held the Guinness world record for many years.

## FOOD USES

When unripe, jackfruit is often prepared by boiling chunks of the fruit in slightly salty water. When it is tender, the flesh is then cut from the rind and served as a vegetable dish. The flesh can be dried and kept in airtight storage for up to a year. It is common to find unripe jackfruit preserved by pickling, either spiced or by itself. The texture of the unripe fruit is sometimes compared to that of pulled pork or chicken and it may be referred to as a “vegetarian meat”.

Ripe jackfruit can be eaten raw or cooked. A popular method is to cook the flesh in coconut milk. The flesh can be canned by itself or in a syrup made with honey or sugar and citric acid.

The bulbs from the ripe fruit are used to make ice cream, jams, jellies, fruit leathers, chutney, and preserves. They are often made into a pulp which is then used to make jackfruit nectar or it is dried and reduced to make a concentrate or powder. If the bulbs are allowed to ferment and then distilled, a potent alcohol will result.

The seeds from the fruit can be enjoyed boiled or roasted. They are also boiled and then preserved in a syrup. Canning them in a brine, curry sauce, or tomato sauce is another popular method of keeping them. The dried, roasted seeds can be easily ground into a flour to mix with wheat flour for baking needs.

## MEDICINAL USES

In China, the seeds from the jackfruit are used as a type of tonic to help with hangovers. When roasted, the same seeds are considered to be an aphrodisiac. The root is used in various remedies for asthma, diarrhea, fever, and skin conditions.

Wounds are often treated with poultices from the bark or heated jackfruit leaves. When the leaves are burned along with corn husks and coconut shells, the ash is used to treat ulcers, either by itself or mixed with coconut milk.



# Lemongrass

**Family:** Poaceae

**Botanical Name:** *Cymbopogon citratus*



## DESCRIPTION

Many fans and homeopathic experts consider lemongrass an “aromatic healer”. The fragrant plant is a native to Malaysia and is now grown in many counties across the globe. Here in tropical Hawaii, it is grown in gardens and in pots on the lanai. It will still grow in colder climates but will need to be sheltered in the winter months or brought indoors. Like many herbs, it can make a lovely houseplant if placed in a south-facing window.

This perennial herb is easy to grow, preferring sunny locations with fertile, well-drained soil. Classified as a grass, the leaves of this herb can reach lengths of up to 3 feet long. It enjoys regular watering and should not be allowed to dry out completely. Many people grow lemongrass simply as an ornamental and fragrant backdrop for other plants in their garden.

Lemongrass is a rather unassuming and plain-looking plant that rarely flowers. The appearance is that of a clump of tall grass and doesn't generate much excitement - until you smell it. Once you get a whiff of the tangy, sweet lemon scent, your impression of this versatile plant will improve drastically. The plant reminds one slightly of green onions in that it has a fat, white stalk at the base of each group of leaves that looks like a spring onion bulb. The entire clump of grass is made up of these individual stalks.

## FOOD USES

Lemongrass is a common ingredient in everyday Thai meals as well as special dishes. It adds a desired citrusy aroma, flavor, and nutritional quality to the food. The herb is packed full of healthy vitamins, minerals, and antioxidants while having zero cholesterol and zero fat.

The bulb from the lemongrass stalk is used in cooking and can be treated like a tender young onion would be. It can be chopped, crushed, ground, or slivered as well as dried if desired. The zesty flavor lingers when it is cooked or dried but is the most potent when eaten raw.

The tender inner leaves can also be prepared like a vegetable, but are most often brewed for making teas. It is recommended to remove the outer leaves as they can become hard and stringy.

## MEDICINAL USES

Aside from the culinary uses above, lemongrass is widely used for homeopathic remedies. The antibacterial, antifungal, and antimicrobial properties in the plant make it a highly sought-after herb. It is also called "fever grass" as it is a febrifuge that lowers high temperatures. An essential oil extracted from the plant is another way in which lemongrass is beneficial.

Other conditions such as arthritis, anxiety and nervous disorders, insomnia, digestive issues, menstrual symptoms, and even cancer are all said to improve or disappear with regular use of lemongrass in one form or another.



# Lychee

**Family:** Sapindaceae

**Botanical Name:** *Litchi chinensis*



## DESCRIPTION

While it isn't grown as a large commercial product here in Hawaii, the lychee tree is a popular resident of many backyards and gardens. Also known as *litchi*, this native of China has been recorded in historical documents as early as 1059 A.D.

The lychee tree is an attractive tree that can reach heights of up to 50 feet or more with a dense canopy of almost equal proportions. They are a slow growing tree that doesn't produce fruit until about ten years after planting. A common practice of grafting the lychee onto a host tree cuts the fruiting time down to about four years. Once it begins producing fruit, the tree will provide up to several hundred pounds of fruit annually depending upon the variety and growing conditions.



## FOOD USES

A 3.5 ounce serving of raw lychee provides almost 150% of a person's vitamin C requirements for the day. Add to this the heaping doses of B vitamins, copper, potassium, fiber, iron, calcium, niacin, thiamin, folate, and vitamin A that are also present and you have a very healthy and very tasty treat that you could enjoy daily. No cholesterol, low fat, and low sodium are just a bonus.

The most popular way to enjoy lychee fruit is to eat it raw. The fruit is easy to peel and reach the soft white, pulpy flesh that surrounds the inedible seed. The taste is said to be close to that of a grape, being slightly acidic and flavorfully sweet.

It is also common to use the lychee in salads or as an ingredient in a healthy smoothie drink. Lychee jam or jelly is a lovely way to preserve the sweet fruit taste to be enjoyed at a later date. This being said, the fruit does keep fairly well for several weeks and will start to turn brown before becoming overripe. Dried lychee fruit is enjoyed like raisins and is very popular.

Diabetics should eat lychee in moderation as the high fructose levels can cause blood sugar spikes in some patients.

## MEDICINAL USES

Medical studies have proven that eating lychee fruit ease abdominal pain and discomfort, soothe coughing, and be effective in reducing swollen glands and even tumors. Another study shows that the lychee seed helps inhibit the growth of both breast cancer and liver cancer cells. Many other studies are currently underway to prove the effectiveness of various parts of the lychee against different types of cancer and other ailments.

## OTHER USES

Lychee honey from both China and Florida has become a popular "byproduct" of growing lychee trees. By keeping their hives in the lychee groves, exceptionally large amounts of sweet honey is produced. This honey is light amber color and tastes like the lychee fruit juice that leaks from a freshly peeled fruit. A unique characteristic of this particular honey is that it doesn't granulate.



# Malabar Chestnut

**Family:** Bombacaceae  
**Botanical Name:** *Pachira aquatica*



## DESCRIPTION

The malabar chestnut is a stately tree that has many aliases which can lead to a lot of confusion. Aside from being marketed in a (related) houseplant version as a “money tree” or “money plant”, the tree is also called the guiana or guyana chestnut, pachira glabra, provision tree, and saba nut. Whatever you choose to call it, it is an interesting tree with a lot of character.

The greenish bark that covers the malabar chestnut adds to the show this tree presents. It can reach over 50 feet high in tropical climates like Hawaii, but it is often kept to more manageable heights. The brilliant white blooms are very large and curl back to reveal the long stamens.

The fruit of the malabar chestnut is actually a large seed pod that can grow up to 12 inches long in many cases. The pod will remain intact on the tree until the seeds (nuts) inside cause it to burst

open and allow the seeds to fall to the ground. The seeds are rounded and are usually about a ½ inch in diameter or larger.

## FOOD USES

The nuts of the malabar chestnut can be enjoyed raw or prepared. The raw nuts have a taste that is comparable to raw peanuts. These raw malabar nuts can be stored in a cool, dry place for several months and remain fresh.

The nuts are often baked, broiled, fried, or roasted. Roasting or frying the nuts turns the taste to more of a chestnut flavor than the raw peanuts. The nuts are eaten as snacks, added to baked goods, or even tossed in salads. When cooked and dried, they can be ground into a nut flour that is suitable for baking and other cooking uses.

The flowers and leaves of the malabar chestnut can be eaten and enjoyed as vegetables.

## MEDICINAL USES

The various parts of the tree and its fruit have been used in medicinal remedies for centuries in Central and South America. The seeds of the malabar chestnut have been shown to possess anesthetic properties while the skin from the immature fruit is used as a hepatitis treatment.

The dried bark is said to ease headaches and stomach complaints. When the bark is boiled, it is used as a blood tonic for various issues. Crushing the leaves into a cold water infusion may help soothe the skin.

## OTHER USES

The bark of the malabar chestnut is often used to make a yellow or red dye. It also produces a fiber that is useful in making a type of caulking and cording.



# Mandarin

**Family:** Rutaceae

**Botanical Name:** *Citrus x limonia*



## DESCRIPTION

The mandarin tree of Hawaii has an identity issue. It has so many names, it (along with many residents of the islands) can't decide which moniker to choose: canton lemon, cravo lemon, hime lemon, Kona lime, kusai lime, lemandarin, mandarin lime, marmalade orange, rangpur lime, surkh nimbu, or sylhet lime? Tough decision for such an interesting member of the citrus family to make.

It is thought that the mandarin may have originated naturally from a crossing of a lemon tree and either a mandarin orange or tangerine tree. According to various records, the mandarin tree was introduced to Hawaii sometime in the late 1800s where it has happily made its home since.

The outward appearance of the tree is similar to that of most citrus trees with shiny dark leaves, fragrant white to purple-tinted blossoms, and bright orange or yellow fruit. It thrives in the

well-drained volcanic soil of Hawaii and enjoys the plentiful sun and sufficient rain. It is a fairly cold-hardy tree that can do well in most climates and elevations of the islands. If left to its own devices, the tree will reach up to 20 feet tall. It can be pruned to more manageable heights.

The fruit of the mandarin tree resembles both of its ancestors by looking like a lemon and a tangerine on both the inside as well as the thin peel. The fruit remains on the smaller side and leans more to the lemon regarding acidity and tartness. It also doesn't smell sweet like most of the citrus. Instead, it has a "lemony fresh" and clean aroma.

## FOOD USES

The mandarin fruit can be enjoyed raw, as a garnish, or in a juiced form. The fresh juice makes a great addition or flavorful mixer for cocktails such as margaritas and other beverages. There is a popular gin that is made solely with the mandarin fruit juice.

Other ways to enjoy the mandarin taste are to add the fragrant zest from the peel or the juice into recipes as a replacement for its cousin, the key lime. It is a necessary ingredient in key lime pie, preserves, jellies, and icing for baked goods. The limes will store on the counter for about a week and even longer if put in the refrigerator.

## MEDICINAL USES

Mandarins are also typical of other citrus in their health benefits. Rich in calcium, phosphorus, potassium, and vitamin C, this fruit can help the body heal itself.

The zest from this fruit and most citrus has a substance called limonene can help fight cancerous cells from forming and block growth in others.

## OTHER USES

The acidic juice from the fruit has been used in cleaning applications due to the antiseptic properties as well as the aromatic qualities.



# Meyer Lemon

**Family:** Rutaceae

**Botanical Name:** *Citrus x meyeri*



## DESCRIPTION

When first introduced to the Meyer lemon, people wonder what the difference is between this smaller fruit and the regular Eureka or Lisbon lemons. There are actually quite a few things that distinguish the Meyer lemons from the ordinary. One of which is its origin. The Meyer lemon is, in reality, a cross between a (probable) Lisbon lemon and a mandarin orange.

The fruit which is often called the “sweetheart fruit” was discovered in the early 1900s by Frank N. Meyer from the USDA. He was sent there on a “fruit-finding” mission and was surprised to find this delightful little tree. The interesting part of this was that he didn’t discover this tree out in a backyard or in an orchard. He found this amazing fruit being grown in a pot, inside the house, as a valued houseplant. If it weren’t for Mr. Meyer, this small tree would still be living life as a potted plant in millions of homes in China and the rest of us would be missing out on this sweet lemon.

## FOOD USES

Unlike most of the other lemons, the Meyer lemon is often enjoyed raw due to its much sweeter flavor, courtesy of the orange tree in its ancestry. As with most citrus, the juice is the part of the plant or fruit that is the most useful for culinary purposes.

The juice can be used as a standalone beverage such as lemonade, added to water or cocktails or as a flavoring for other dishes and sweet treats. It is often used to help set up jams and jellies due to the acidity and natural pectin present. Chutneys, marmalades, and preserves are all common ways in which to use and keep your Meyer lemons for future use. The peel of the fruit can be candied to eat by itself or used to sweeten cookies and other bakery items and dishes.

An extremely popular and delicious baked treat aptly called Meyer lemon bars is made with the juice, zest from the peel, and essential oil from the fruit. It is a triple threat dessert that causes your mouth to pucker while craving more of the sugary sweet lemon flavor at the same time.

Meyer lemons can be used to flavor main dishes such as fish and roasts. Salad dressings also benefit from the acidity and sweet-tart boost of flavor it gives them.

The flowers of the tree are sometimes used as an edible garnish for ice cream, baked goods, and even wedding cakes. The soft orangey-lemon scent they give off is a prelude to how they taste. The blossoms can also be added to jams or fried up with fritters for a burst of sweet flavor.

## MEDICINAL USES

Vitamin C is the star in almost every type of citrus fruit. The Meyer lemon is no different as it is packed full of C and other important vitamins, minerals, and nutrients.

A large number of different health concerns have been shown to benefit from regular consumption of lemons and other citrus. These include things such as vitamin deficiency, anemia, high blood pressure, anxiety, respiratory complaints, arthritis, oral health, kidney stones, wound healing, headaches, fever, and skin issues. Some remedies are topical, others are internal.



# Mint

**Family:** Lamiaceae

**Botanical Name:** *Plectranthus parviflorus*



## DESCRIPTION

Like all of the plants in the mint family, those that are indigenous to Hawaii have the signature square-shaped stem. However, unlike their cousins, the four endemic Hawaiian mints do not have the characteristic strong mint smell and taste.

It is believed that because they had no natural enemies on the islands, the plants didn't need to develop a defensive mechanism such as thorns, strong scent, and bitter taste. Many of the different varieties evolved instead by putting their efforts into developing fragrant, gorgeous flowers to attract the pollinators. There were no animals or other plant life that threatened their survival so they could essentially show off instead of honing a defense.



Known fondly as the “mintless mints”, there are four genuses or genera in the mint family that are only found native in Hawaii. They include ala ala wai nui , honohono, ma ohi ohi , and ulihi .

**Ala ala wai nui** (*Plectranthus parviflorus*) is not to be confused with several other plants with the same or similar sounding name. This genus along with that of the ma ohi ohi are the only two of Hawaii’s native mints that are widespread throughout all of the main islands. It has become popular as a potted plant as well as ground cover in many gardens throughout the area.

The **honohono** (*Halostachys halostachys*) genus of scentless mint was never a widespread plant in the wild, to begin with. This tender plant can now only be found in its natural habitat in a small population on the big island of Hawaii. At least four of the varieties belonging to this genus are extinct, with several others on the endangered list. Scientists place a large amount of the blame on the introduction of foraging livestock to the plant’s habitat.

**Ma ohi ohi** (*Stenogyne Benth.*) plant family members are found in the wet forests of Kauai, Maui, and Molokai. They have crisp, rounded leaves that grow on woody vines. Their flowers tend to be of the longer, tubular shape which makes researchers think that the forest native honeycreepers with their long, curved bills were the original pollinators of these beautiful plants.

The **ulihi** (*Phyllostegia floribunda Benth*) has almost 30 varieties in its genus with all of them classified as either endangered, extinct, or rare. These mints prefer wetter areas of the islands and thrive in the wet forests of Hawaii, Oahu, and Maui. They vary in size as well as growth habit as some are shrubby while others have vine-like tendencies. The majority produce a larger flower than most other mints.

## USES

Because these mints don’t have the bitter taste and strong aroma (that are what people actually enjoy about other plants in the mint family), they aren’t often used in the kitchen. The more popular genuses such as spearmint and peppermint are favored in culinary and medicinal uses.

These “mintless mints” of Hawaii are used in gardens and on patios for their beauty, fragrance, and ease of growing. Like almost all mints, these plants can get out of control if left to their own devices. Mints in the garden are notorious for becoming invasive if not monitored.



# Miracle Berry

**Family:** Sapotaceae

**Botanical Name:** *Synsepalum dulcificum*



## DESCRIPTION

In the US, Hawaii is one of the only places along with southern Florida, that the Miracle Berry can be grown outside. The rest of the country has to make do with keeping it as a potted plant. The *Synsepalum dulcificum* hates frost and will not survive any long term cold temperatures. It is a native of the hot, wet tropical areas of West Africa that prefers partial shade when grown outside.

This evergreen berry bush or tree can reach almost 20 feet high in its native environment but tends to stay around 5 feet tall or shorter everywhere else. The leaves differ in shape and color depending on the exact variety being grown. Clusters of small white flowers appear several times a year with fruit usually following.

The fruit of the miracle berry tree is a long oval-shaped berry that can grow to just a little over an inch long. Each fruit contains a single seed that is surrounded by an edible, fleshy pulp.

## FOOD USES

Miracle berry's claim to fame comes from an interesting chemical reaction that occurs when a person eats the berry. While the berry isn't sweet on its own, it can change the taste of other foods from sour or tart to sweet. It allows you to eat foods that you might not be able to handle or properly taste otherwise.

The transformation takes place when the berry is eaten and the pulp is allowed to cover the inside of the mouth and the tongue's taste buds. For the next half an hour or so, you can eat lemons, limes, other tart fruits, and even taste vinegar without the usual bitterness and bite. You can still experience their unique flavors and smell their enticing aromas, but their taste will be modified to a more pleasant one.

## MEDICINAL USES

The most extraordinary use of the miracle berry fruit is in helping chemotherapy patients. Two side effects of chemotherapy treatments are lowered appetite and rapid weight loss. This is due in most part to the taste-altering traits of the medicine. Patients don't want to eat because they can't taste food or it tastes very bad to them. The miracle berry could help with these side effects.

Although the initial studies aren't showing a significant change in the weight loss aspect, there are promising results regarding the appetite and taste. The patients studied reported a definite improvement to their taste buds and the flavor of foods.

## OTHER USES

There have been some attempts in the US to market the miracle berry fruit as a sweetener that replaces sugar and other ingredients in order to reduce calories. The USDA nixed this idea when they classified it as an additive instead of sweetener, making it a less feasible endeavor.



# Mulberry

**Family:** Moraceae

**Botanical Name:** *Morus nigra*



## DESCRIPTION

The black mulberry tree is a native of western Asia. It was said to have been already established in Europe long before the Romans ruled. It wasn't until the early 1800s that the tree ended up here on the islands. They were brought here initially as a landscape tree and not for their delicious and versatile fruit.

Smaller than its cousins the white and red mulberry trees, the black mulberry only gets about 30 feet tall. If it is left to its own devices and not pruned or trained, it will often become more of a giant bush than a tree. The longevity varies with these trees with some black mulberries still producing fruit after a hundred years or more.

Even though the mulberry can withstand heavy winds and cold temperatures well below freezing, it prefers a sunny location with a lot of space. Regular watering is important as the fruit will drop from the tree without developing if the tree is without water too long.

## FOOD USES

The fruit is actually not considered a “berry” by botanists as it is a collective fruit comprised of multiple “berries”. It has found its way into many dishes and recipes that take advantage of its sweet and tart, juicy flavor.

It can be eaten raw, freshly picked, or as an ingredient in jams, jellies, and preserves. Pies and tarts are often made with the rich, sweet fruit as well as potent cordials and wines. The mulberry fruit is regularly used as a flavoring for desserts such as ice creams, sherbets, and baked goods.

## MEDICINAL USES

Mulberry fruit has been used for centuries as a remedy for sore throats. Either eaten raw or made into a syrup or beverage it is known to soothe coughing and throat irritations.

The leaves of the mulberry tree have an ingredient called resveratrol which has anticancer and anti-inflammatory properties. The leaves are often made into supplements to take advantage of the resveratrol.

Tapeworm treatments are made from the root of the mulberry tree while the inner bark is used for its laxative properties. Along these lines, eating too much of the mulberry fruit is also known to have a laxative effect.

## OTHER USES

When the mulberry trees are pruned in the fall, the cut branches can be used to make attractive and sturdy baskets. In China, the white mulberry is grown as food for silkworms.



# Noni

**Family:** Rubiaceae

**Botanical Name:** *Morinda citrifolia*



## DESCRIPTION

The noni plant, also known as “Indian Mulberry” is believed to be one of the original plants brought to the Islands in the canoes of the Polynesians. It was highly prized by the culture for its medicinal uses as well as that for dyeing fiber.

This shrub or small tree stays under about 20 feet tall depending on its growing conditions. In the lowlands, it tends to be much closer to shrub size of just a few feet tall.

Noni plants prefer areas that are wet and will grow up to about 1500 feet above sea level. It tolerates brackish water with salt. It will thrive in just about every type of lowland climate and soil condition. It is even often found growing up through cracks in lava flows as it is not picky about where it grows.

## FOOD USES

The most popular culinary use for the noni tree fruit is that of its juice. The fruit is edible and was used as a foodstuff during famine but it is the juice that is so sought after today. Many health benefits are thought to come from drinking noni juice including weight loss and energy boosts.

## MEDICINAL USES

The noni tree has gained a nickname of “The Painkiller Tree” for the analgesic properties found in the juice. A poultice made from mashed ripe fruit was a common remedy for various ailments and skin problems or wounds. It is also touted as an antidepressant, antifungal, antibacterial, and antiviral plant. Helping to block the absorption of cholesterol aids in protecting the memory and encouraging heart health.

Noni has an astringent, insecticidal quality which is why it was once used as a hairdressing. People applied it as a bug repellent. Some fans still use it in hair and skin preparations to aid against eczema and ringworm.

## OTHER USES

All parts of the plant were used in some manner by the ancients. From the roots to the treetops, nothing was left to waste. The stems were used for canoe building and other construction or tool needs. Noni tree bark and roots were prized for their use as a dye. The bark provided a red pigment while the roots were responsible for a yellow color.

There are many reasons to learn more about this interesting and unusual tree.



# Pineapple

**Family:** Bromeliaceae

**Botanical Name:** *Ananas comosus*



## DESCRIPTION

At one point, Hawaii produced over 80% of the world's pineapple crop. That is pretty amazing for a plant that isn't even native to the islands, but instead to South America. It didn't make an appearance on the islands until the late 1800s. It also explains the reason that people automatically associate pineapples and Hawaii. Because the fruit reminds them of the local hala plant, Hawaiians call the pineapple "*hala kahiki*" which means "foreign hala".

Pineapples are actually a perennial herb that grows well in the lower elevations of Hawaii's islands. It thrives in the acidic, well-drained soil where wind is rarely a problem. The cool nights, sunny days, and warm (not overly hot) daytime temperatures all combine to create a perfect environment for the pineapple plant. While the plant is fairly drought-resistant, maximum growth



and production are reduced if adequate water is not available. Reaching up to 8 feet tall and about 4 feet in diameter, the plant will produce fruit annually from March to June.

## FOOD USES

Pineapples are extremely high in vitamin C as well as having healthy doses, low in sodium, and free from fat and cholesterol. This juicy, sweet and sometimes tart fruit also boasts potassium, folates, riboflavin, copper, thiamine, magnesium, and other vitamins and minerals.

It is not advised to eat unripe pineapple as it doesn't have the sugars to sweeten the taste and it does cause adverse reactions in some people. The ripe fruit, however, is a different story. It can be eaten raw or as an addition to many dishes and beverages. It lends itself well to being used in jams, jellies, and preserves. Dried pineapple makes a sweet snack that travels well. A popular way to eat fresh pineapple slices is to grill it and then drizzle honey over the warm fruit.

Bromelain is an enzyme in pineapple that breaks down protein similar to the way digestion works. As this reaction also affects other foods, you shouldn't mix dairy products with fresh pineapple until right before eating or serving it. On the other hand, it is beneficial to add fresh pineapple either as chopped fruit or in juice form to meat marinades. This works to tenderize the meat while adding great flavor and juiciness to the meat.

## MEDICINAL USES

Historically, pineapple has been used to treat wounds and skin conditions. A plaster can be created by molding a piece of fresh fruit to an injury to promote healing. Bunions, corns, and warts are removed in a similar manner as the bromelain enzyme works to remove the diseased tissue, leaving the healthy tissue intact.

Studies are in direct disagreement as to whether or not those with stomach ulcers should ingest pineapple fruit or juice. One side claims that the acidity in the pineapple will aggravate and worsen the ulcers. The opposing view is that the fruit's enzyme bromelain alongside the amino acid glutamine that is also present will actually be beneficial. Both of these substances have anti-ulcer properties and are said to aid with digestion.



# Rosemary

**Family:** Lamiaceae

**Botanical Name:** *Rosmarinus officinalis*



## DESCRIPTION

Many popular herbs come from the tropical climates of the Mediterranean. They prefer warm temperatures with plenty of sunshine, good soil, and adequate water. The rosemary plant is no different and this may explain why it thrives in these perfect conditions here on the islands. The literal translation for its official name of *Rosmarinus officinalis* is “dew of the sea”. This aptly describes its preference to living on the edges of sea cliffs in both Hawaii and its native lands.

There are two general types of rosemary: upright and sprawling. Both are at home in Hawaii and both have similar attributes, other than their growing habit. The evergreen herb is a shrub that can reach about two feet tall in the upright version. The sprawling rosemary can go on indefinitely when the conditions are favorable.

Rosemary is an easy to grow, drought-resistant plant that hates to have wet roots. It prefers full sun and dry, well-drained soil. It can be grown as a potted plant or houseplant indoors but becomes more needy of attention in those circumstances.

## FOOD USES

Rosemary has a distinct flavor that is valued by cooks the world over. It brings to mind a spicy pine flavor with just a slight tinge of camphor. Beef, chicken, fish, and seafood dishes all benefit from the addition of either dried or fresh rosemary. Other meats such as lamb are often decorated as well as seasoned with this versatile herb. Potato dishes, stews, soups, and vegetable dishes are all enhanced with rosemary.

The barbecue grill is a popular place to find sprigs or bundles of rosemary. Many chefs like to use fresh sprigs inserted into pieces of meat or whole chickens while they cook. Some will bundle several sprigs together to use as a basting brush. Even more will use the long, tough stalks from the upright version of rosemary as skewers for grilling kabobs. (The harvested stalks need to be soaked in water for several hours to overnight before grilling in order to keep from burning.)

## MEDICINAL USES

Rosemary is full of calcium, copper, fiber, folate, iron, potassium, magnesium, manganese, minerals, riboflavin, as well as A, B, and C vitamins. In this instance, to get the most benefits from rosemary, dried is better. This is because the ingredients become more concentrated once the moisture is removed.

For centuries, different cultures have relied on rosemary for easing memory loss. It has earned the nickname “memory plant” in various areas because of its ability to stimulate the brain. Even just sniffing the rosemary essential oil can help with mental alertness. The wonderful aroma is popular as an incense either by itself or combined with other complementary essential oils.

Antibacterial, antifungal, anti-inflammatory, antioxidant, and antiseptic are just a few of the words used to describe the useful qualities found in rosemary. The flowers, leaves and the essential oil derived from them have all been used to treat various ailments for centuries. During the “Black Plague” branches of rosemary were placed on the floors of homes in attempts to ward off the disease. It is still common to place sprigs in chicken coops to ward off insects.



# Sage

**Family:** Lamiaceae  
**Botanical Name:** *Salvia L.*



## DESCRIPTION

Sage is an aromatic herb with a long history of use in culinary, medicinal, and other disciplines. The name salvia comes from the Latin term “salvare”. It is a perfect descriptor of this beneficial plant as it means “to heal, help, or save”.

There are many types and varieties of salvia in the world with many of them being only ornamental. The majority, however, are edible. This perennial herb grows to between one and two feet tall. It has an edible gray-green leaf that can vary in shade and veining depending on which variety you’re looking at. The leaves appear to be and are soft to the touch.

You can often tell you which variety you have from their leaves as their names can be quite descriptive. Pineapple sage tastes like it sounds, golden sage has golden veined leaves, purple sage has purple leaves and flowers, etc. They are an easy plant to get to know and love.

## FOOD USES

When Americans are asked about sage, the overwhelming majority will tell you that it is the most important ingredient in the Thanksgiving stuffing. This flavorful and fragrant herb adds just the right earthiness and warm essence to this favorite traditional dish.

Because sage is a pungent herb, it is best used in small doses with foods that don't compete with it for flavor. It is great paired with cheeses and in egg dishes as well as mushrooms and potatoes. The aroma makes the mouth water in anticipation. Sage can be found dried, fresh, ground, or rubbed with fresh being the preferred state.

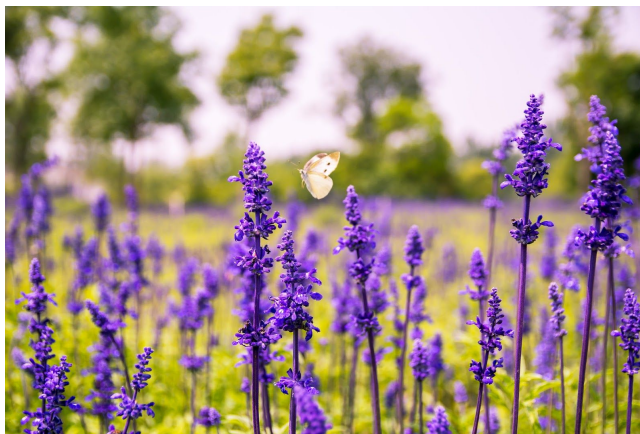
## MEDICINAL USES

Ancient civilizations to the middle ages to today's modern world all have used sage for medicinal purposes. It has antiseptic qualities that helped with anything from a skin rash to a snake bite. Compresses, teas, and tonics were all made from this fragrant herb. It was said that chewing on a fresh sage leaf could help with a toothache and other oral issues - including bad breath.

Sage has analgesic properties that essentially made it the first "aspirin" for early cultures. A tea from fresh sage leaves is said to help soothe a sore throat and ease coughing. Like its close cousin rosemary, sage has been shown to increase mental alertness, improve memory, and help ease anxiety. Other conditions such as gastric disorders, menopausal and menstrual symptoms, muscle tension, and fevers have all been eased by consuming sage in one form or another.

## OTHER USES

Bundles of sage leaves are often burnt in a practice called "smudging". The ceremony is an ancient ritual that combines cultural, herbal, medicinal, and spiritual beliefs to help balance energy. It is often performed in new homes as a type of blessing and at other times or places to help deal with negative energy.



# Samoa Coconut

**Family:** Arecaceae

**Botanical Name:** *Cocos nucifera*



## DESCRIPTION

Coconut trees are a tree that can produce fruit for up to 80 years or more. Once each fruit is formed on the tree, it can take almost a year to develop into a ripe, usable fruit. The good news is that the tree is continually adding fruit throughout the year. This means there is fruit of every age and stage of development on the tree at any given time. Annually producing anywhere from between 50-100 fruits per year, this can be a great tree to plan on growing old with.

Believed to have originated in the South Pacific, the true, exact origins are still somewhat of a mystery. The different coconut varieties have been found on the sandy coasts and tropical climates of countries all over the world. While man is definitely responsible for some of the journeys the coconuts have taken, the coconut itself also shares the credit for its widespread

wanderings. A coconut fruit can easily float on the ocean for several weeks to months at a time before coming ashore. Once ashore it literally sets down roots and calls its new spot home.

Tall and “dwarf” versions are both popular with coconut trees. The smaller versions such as the “Dwarf Samoan” are an attractive addition to any backyard. They have similar needs of their taller cousins and are equally productive - with the benefit of the fruit being easier to harvest. All coconut trees thrive in porous, fertile soil that receives 60 inches or more of rain or hand watering. Lots of sun is also a top requirement for a happy, healthy tree.

## FOOD USES

Coconut flavored goodies have been around for centuries. This sweet and nutty fruit lends itself to dishes in many cuisines. Use it fresh or prepared in any way imaginable: dried, shredded, toasted, baked, desiccated, candied, and pureed. The oil is great for cooking and baking. Coconut milk, flour, and butter are all products possible from this exceptional fruit.

## MEDICINAL USES

Coconut water is a low-fat alternative to coconut oil for some remedies. It is a tasty and nutritious choice for keeping you hydrated. It has many of the same claims for health benefits as coconut oil. Antioxidant properties, fighting diabetes, supporting heart health, reducing blood pressure, helping fight kidney stones, and acting as a brain booster are just a few. Coconut oil has also been said to have analgesic, antifungal, and anti-inflammatory attributes.

## OTHER USES

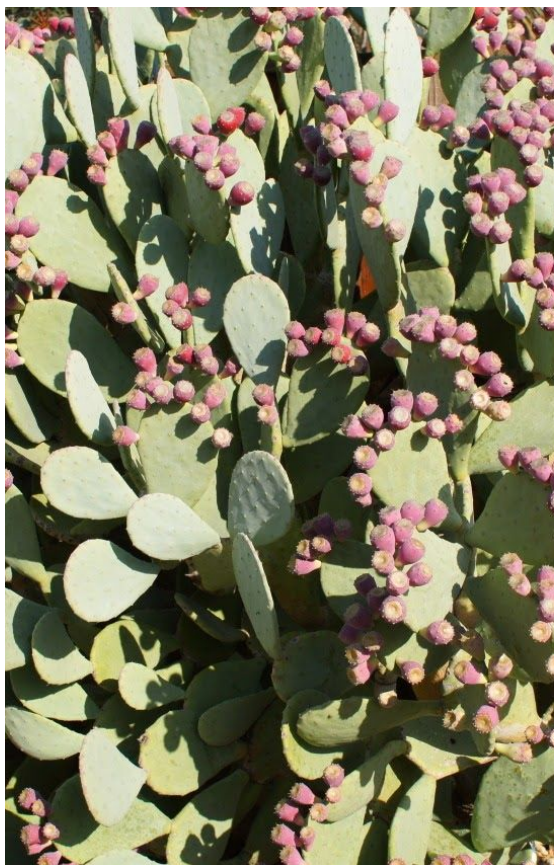
Coconut butter or oil has been used in beauty preparations for centuries. It is now common to find the ground up shell added as a natural exfoliant to many cleansers. The fruit isn't the only valuable part of this tree. The trunk, roots, fronds, husks, shells, copra and coir have all been found to be useful in various endeavors.



# Spineless Prickly Pear

**Family:** Cactaceae

**Botanical Name:** *Opuntia ficus-indica*



## DESCRIPTION

The spineless prickly pear is an *almost*-thornless cactus that is prized for being a great source of food, drink, and medicine. In spite of the name, the leaves or pads of the *Opuntia* are not completely spineless. There are, in fact, large amounts of tiny, hairlike spines that grow in bunches on the flat leaves. They look like small, white spots on the skin of the pad. These “glochids” can be easily removed with a knife when preparing the leaf for use.

While there is a lot of disagreement on exactly which cultivar is the correct name for this cactus, there is agreement on how it became widespread on the islands. Most experts agree that it was brought in from Mexico in the late 1700s to early 1800s for cattle ranchers as a living fence or barrier (also known as a “panini” for fence wall in Hawaiian.) A possibly good idea in the



beginning as it could be used for fencing, food, and moisture for cattle as well as food and drink for people, its desirability didn't last long.

If not planted in exactly the right spots and extensively managed, the cactus plants easily spread and became invasive. They took over cattle pastures in a short time, edging out native plants and natural grasses. Another issue that cropped up over time was the plant's reversion to having thorns or spines even though spineless plants were originally introduced.

It is interesting to note that the *Opuntia* family of cacti are native to all but four of the states in the US - Hawaii being one of them. The other three are Maine, New Hampshire, and Vermont. Even southern Alaska is an original home to these fascinating plants.

## FOOD USES

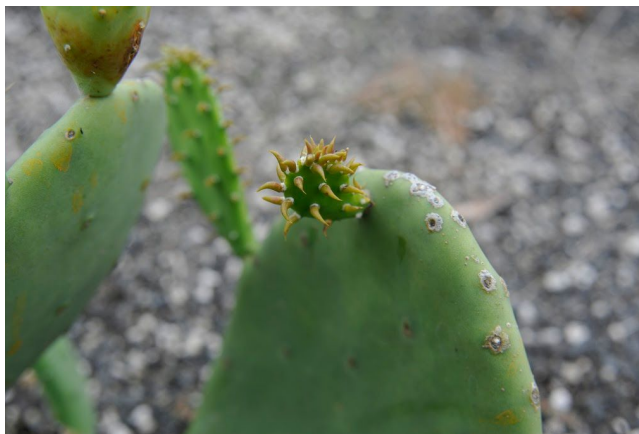
The luscious fruit (called a "pear" or "tuna") of the prickly pear cactus is a favorite for eating raw or making a juice or pulp that can be used for jams, jellies, and preserves. Be sure to remove the seeds as they can be extremely hard. (You can definitely dry the seeds and grind them for a nutritious and nutty tasting flour.) The tangy fruit is often fermented and makes a lovely looking and even better tasting wine.

The leaves ("nopales") are prepared in the same manner as the fruit by peeling them. They can also be eaten raw or cooked. Many people treat them just like any other green vegetable and use them in dishes as such.

## MEDICINAL USES

Along with generous doses of fiber, prickly pear has a lot of other ingredients that make it a healthy choice of fruit. Vitamin C along with several members of the B vitamin family are in every serving. Calcium, copper, magnesium, and potassium are also abundant in this tasty fruit.

In traditional medicines, prickly pear was often mashed into a pulp and placed on sore or irritated areas of the body. It was believed the plant could draw out the inflammation. Studies are showing that consuming the cactus does have some anti-inflammatory properties. The same topical application to insect bites has also proved to be effective in easing itching, pain, and redness.



# Starfruit

**Family:** Musaceae

**Botanical Name:** *Musa sp.*



## DESCRIPTION

The name “starfruit” might be deceiving when you first see this interesting fruit. It is actually long and narrow with five distinct and rigid lobes that are so distinctive of the fruit. In fact, a nickname for it here in Hawaii is “five fingers” because of these ridges in the waxy edible skin.

Slice off a piece of this yellow-tinged fruit and you will understand the celestial name of “starfruit” immediately. It may not have dropped down from the skies, but each perfect slice of fruit distinctly resembles a bright, juicy star.

This lovely tree native to Asia is a true sun lover – it thrives in full sun. Starfruit trees are an evergreen that produces its unique, sweet and sour fruit twice a year. It can grow up to about 30

feet high and can spread its canopy up to over 20 feet in diameter. It is grown commercially both here on the islands and in Florida as the growing conditions are similar.

## FOOD USES

Starfruit is packed full of antioxidants, potassium, and vitamins. It is also low in acid, sodium, and sugar, making it a great choice for snacking. Health-conscious dieters enjoy the low calories and high dose of fiber in each slice of fruit.

Commonly consumed as a fresh fruit, starfruit is also great for jellies, sauces, and even wine. It does well preserved by canning or as a dried fruit. Many chefs are now adding this versatile fruit to salads and other dishes as more than just a garnish. It has gained popularity as an ingredient in healthy smoothies and is a top pick for sherbet here in Hawaii.

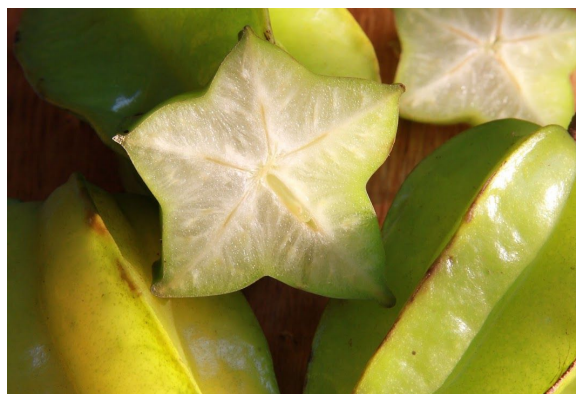
## MEDICINAL USES

In countries such as Brazil, the starfruit is used in home remedies as a cough suppressant, diuretic, and expectorant. There are no current studies or evidence available to support these uses though.

## CAUTION!

Because starfruit contains oxalic acid, it is not recommended for people with any type of kidney issues. Those with compromised kidneys can experience painful and serious side effects from eating starfruit. It can even turn deadly.

Another possible problem with this fruit is similar to that with grapefruit. It can interact with medications such as the statins prescribed for heart conditions. Check with your doctor before eating starfruit if there are any questions.



# Surinam Cherry

**Family:** Myrtaceae

**Botanical Name:** *Eugenia uniflora* L.



## DESCRIPTION

While most people think of a cherry “tree”, this fruit-bearing plant is actually more of a shrub - even though it can grow up to 25 feet tall or so. Hawaiians often have it in their backyard as an ornamental plant, but the fruit is quite edible and for some, enjoyable. The fruit can get up to about 1 ½ inches at its widest point. It has 7-8 ribs with a thin skin that surrounds the flesh of the cherry along with up to 3 seeds. The leaves and fruit emit a strong, resinous aroma.

Even though the Surinam cherry does grow in coastal areas, it does not tolerate salt in the soil. It isn't picky about elevation though, as it is found at sea level AND heights up to 5000 feet. The majority of these plants don't set fruit and become productive until they are about 4-5 years old.

In most environments, the cherry will bloom once in the spring and again in the fall. Due to the loamy soil, abundant rainfall, and glorious sunshine, plants growing in the islands often set fruit all year long. The fruit develops quickly, ripening within about three weeks after flowering.

The Surinam cherry is known by a lot of names, depending on the part of the world. Some English names include barbados cherry, brazil cherry, cayenne cherry, florida cherry, french cherry, pitanga, and red brazil cherry. In Hawaii, it also goes by the descriptive “pumpkin cherry”.

## FOOD USES

The fruit or juice of the Surinam cherry is said to be an acquired taste. It has a slightly resinous, sometimes bitter, flavor that makes one either love it or hate it. Regardless of which side of the fence you fall on, it is mandatory that you only pick and eat the ripe, very red fruit.

With the fruit undergoing numerous color changes as it ripens from green, yellow, orange, and then red, it may be tempting to pick it early. From all accounts, you’ll wish you hadn’t, as your mouth will never forgive you due to the strong resin flavor. Only when the fruit reaches the dark red almost bluish-purple to black-red will it be sweet and juicy enough to truly enjoy it.

When preparing the fruit, it is advisable to wash the fruit and cut it open, removing the seeds. Place the cut fruit in the refrigerator for several hours. This will allow much of the resinous aroma and taste to dissipate.

It is common to find Surinam cherries being used raw in fruit cups or fresh fruit salads. They also lend great flavor to jams, jellies, and other sweet treats like ice cream or sherbet. Tasty and potent liqueurs, vinegars, and wines are commonly made from the fermented fruit.

## MEDICINAL USES

Antifungal, anti-inflammatory, antioxidant, antiseptic, antimicrobial, and astringent properties are all attributed to the cherry plant. It has been used in traditional Brazilian medicines for centuries.

There are many health benefits that are in direct relation to the amount of vitamins, minerals, and other potent ingredients. Vitamins A, B, and C are all in abundance along with iron, calcium, and protein among others. Said to contain over 90% water they are also a great source of hydration.



# Taro

**Family:** Araceae

**Botanical Name:** *Colocasia esculenta*



## DESCRIPTION

Called “kalo” in Hawaii, taro is a major part of the culture and daily life of traditional islanders. Grown primarily as a food source, this easily recognizable perennial herb has jumbo heart-shaped leaves that symbolize their place in the hearts and spirits of native Hawaiians. The corm or root from the taro plant is where the traditional dish of “poi” comes from.

Taro has been cultivated and grown in Hawaii for over a thousand years and even longer in other parts of the world. Hand pollination and vigilant selection has bred plants that have adapted to the varying climates, soil conditions, and elevations of the islands. Due to this dedicated and careful tending, the islands are now home to over 300 different varieties of the plant. Some are best grown in the more arid drylands while even more thrive in the wetlands.

## FOOD USES

It is said that early Hawaiians were in the habit of eating up to 15 pounds of taro (poi) every day. This famous, traditional food is made by boiling the starchy taro root and then pounding it with small amounts of water in order to make a paste. That paste is what is used to make the dish known as poi. It is served at all Hawaiian luaus as well as any other ceremonies and events. The corm can be cooked and served like potatoes, yams, or sweet potatoes. As it is such a starchy substance, it can also help thicken soups and stews.

While poi is made from just the corm, all parts of the taro plant are used for food as well as other uses. This includes the leaves and stem. Nothing is wasted on this revered and sacred plant. The important thing to remember though is that taro must be cooked. Eating it raw or unprepared can be toxic.

The leaves when young and tender, can be boiled or cooked as a vegetable in other ways. The leaves are reminiscent of spinach and can be prepared and used in similar dishes and ways. A popular way of fixing them is to cover them in coconut cream and then wrap them in other leaves such as banana or breadfruit. This “package” is then cooked on the hot stones of the fire for a sweet and nutritious treat.

## MEDICINAL USES

Some of the health benefits of the taro root are said to be improved digestion, lowered blood sugar levels, cancer prevention, increased circulation with lowered blood pressure, improved skin condition, boosted immunity and vision health, and better heart health.

High in fiber, taro root is also full of important vitamins such as A, B6, C, and E. It is not especially high in protein, but it makes up for that with large amounts of other nutrients. These include iron, zinc, magnesium, manganese, potassium, folate, phosphorous, and copper. All of these essential vitamins and minerals combine with almost 20 amino acids to make the taro root an almost perfect food. There is obviously a very good reason the islanders have depended upon it for nutrition and health for centuries.



# Thai Basil

**Family:** Lamiaceae

**Botanical Name:** *Ocimum basilicum* var. *thyrsoflora*



## DESCRIPTION

Arguably one of the prettiest of the basil family, Thai basil is a stunning plant with purple stems and purple-veined leaves. The shiny green leaves accent the petite blooms that appear in varying shades of lavender to dark purple. Basil is extremely fragrant with the essential oils derived from it often being used in perfumery.

This bushy, sun-loving plant can easily reach heights of over two feet as long as it is kept moderately watered in well-drained soil. Regular pruning encourages continual growth and production. Keep in mind that it is best to gather most herbs in the morning while the oils are still up in the leaves. Basil bruises easily so be gentle when harvesting.

Like most of its many relatives in the basil family, Thai basil is an edible flowering herb that can be grown as either an annual or a perennial. Most basil plants reseed themselves easily and this



one is no different. It is easy to start and grow from seed or may be found as started plants at your local plant nurseries or online.

## FOOD USES

Thai basil is one of the top basil varieties for use in cooking. It was bred over time to withstand high temperatures without losing flavor or nutritional value. Believed to have originated in Thailand (hence the name), it has gained worldwide popularity for its versatility in the kitchen.

Any type of egg, fish, meat, or poultry dish will have an extra bit of “wow” when you add basil. Tomato soups are given an extra taste sensation when pureed basil leaves are added to the pot. Stews and homemade bread are other great ways to enjoy this unique taste.

Hot dishes aren't the only places where Thai basil boosts flavor. Beer, infused oils, and vinegars are all made with Thai basil. Refreshing teas and other drinks are commonly flavored with this lovely herb. Herbal butters also benefit from the addition of chopped basil leaves.

## MEDICINAL USES

Some studies have shown that the antibacterial properties present in basil can actually help make your food safer. By washing your fresh produce in a weak (1%) solution containing basil and/or thyme essential oil, you can reduce the amount of certain bacteria to the point of being unable to detect the bacteria.

The beta-carotene found in basil may aid in reducing the symptoms and slowing the progress of ailments such as asthma and certain forms of arthritis. The magnesium present in the plant can also help promote heart health as it relaxes the muscles and increases blood flow.

Thai basil is often used in aromatherapy for lessening stress. One of the great things about this versatile plant is that you don't even have to use a diffuser or the essential oil. Simply picking some fresh basil leaves from your garden and crushing or bruising them with your hands will release their delightful scent. Breathe deep and you'll feel more relaxed in no time.



# Thyme

**Family:** Labiatae

**Botanical Name:** *Thymus vulgaris* L.



## DESCRIPTION

Thyme is a less recognizable plant than some of its cousins in the mint family, but it is no less powerful and useful as both a culinary and medicinal plant. This woody perennial is a highly aromatic plant that thrives in dry, sunny conditions with well-drained soil. It is a favorite of honeybees as the tubular flowers of white, pink, and lavender have a lot to offer. Because it is an evergreen plant, the gray-green leaves can be harvested all year long.

There are hundreds of thyme varieties with many growing habits. Some are taller, bushier plants while some are trailing or creeping types. The creeping types of thyme are often planted as a hardy, fragrant groundcover that gives off a wonderful scent with each step as you walk along its path. All of the varieties are edible and fragrant.

## FOOD USES

The leaves and flowering tops of the thyme plant are used in various dishes and preparations. Raw thyme adds a lovely, pungent boost to fresh green salads, egg or mushroom dishes, and other baked goods. It can also be dried and preserved for later to be used in the same manner. Both fresh thyme plants and the dried product are readily available at most grocery stores.

Being a Mediterranean plant, thyme really shines when it is blended with ingredients from its place of origin. These might include garlic, olive oil, and tomatoes. Pasta dishes, any type of beans or rice, poached fish, and soups or stews will all benefit from the addition of a bit of thyme - fresh or dried. It's a good idea to add the herb near the end of cooking as heat can cause it to lose some of its potency. The dried leaves make a spicy and soothing tea.

## MEDICINAL USES

Antibacterial and antimicrobial properties in thyme make it a great kitchen remedy for those prone to acne. It helps with drying out the acne and then killing the bacteria that causes it. These same properties come into play when using thyme in a gargle or mouthwash to combat tooth decay and bad breath.

Thyme essential oil vapors are said to be helpful for respiratory and bronchial conditions such as asthma, whooping cough, and emphysema. Adding the oil to a bath can aid with these same conditions in addition to soothing arthritis and aching muscles.

## OTHER USES

Due to the strong and aromatic scent of thyme, it was used since medieval times and earlier as an incense. It does well mixed with lavender, rosemary, and other fragrant herbs to lighten the air. Burning thyme can remove bad odors from a room or home. It was used everywhere during times of plague and great illness. This is a descriptive and telling use of the herb as the Greek word "thymus" has two meanings: "courage" and "to fumigate".



# Toothache Plant

**Family:** Asteraceae

**Botanical Name:** *Spilanthes oleracea*



## DESCRIPTION

Due to its peculiar looking red and yellow flowers, the toothache plant is also called the eyeball plant and the peek-a-boo plant. The fun-sounding names just add to the interest this plant attracts. With its many medicinal uses, you never know when it could come in handy to have it growing in your backyard. It also gives your guests a lot to talk about when they see it.

A member of the Asteraceae family, this unique plant is related to asters, cornflowers, and daisies. Aside from the striking flowers, it does have an attribute that it doesn't share with them - the numbing effect on a person's mouth when the plant is chewed or eaten.

The toothache plant is native to tropical climates so it doesn't do well in colder climates and it is not frost-hardy. It starts easily from seed and is considered an easy to grow plant. It likes full sun, plenty of water, and fertile, well-draining soil. Low growing with large leaves, it is as popular as a

houseplant as it is as a garden focal point. The bright red and yellow “bullseye” flowers will grab the attention of anyone who sees it.

## FOOD USES

There are not a lot of reports of the toothache plant being used as a major food source. It has been said that it is quite tasty in rice and salads when it has been cooked with garlic. Records also show the plant to be possibly used in making cocktails and mixed drinks.

## MEDICINAL USES

The toothache plant is aptly named as it has long been a folk remedy in most of India for oral conditions. The act of chewing the flower releases an antiseptic alkaloid called Spilanthol. It has a numbing quality that acts as a local antiseptic and relieves temporary pain. The Spilanthol is found in every part of the plant but it is most heavily concentrated in the colorful flowers.

Reports have shown that some indigenous cultures in tropical areas also use this antimicrobial plant to treat malaria as well as for a urinary antiseptic. Because it has properties that will kill bacteria, fungi, and viruses, it helps battle many infections.

The toothache plant is said to help with chronic fatigue as it boosts energy and vitality while helping to ease general aches and pains. Arthritis sufferers may also find some relief when using this plant.

Many studies are in the works to learn more about what this fascinating plant can do. Some of the research is looking into the possible benefits to heart health and blood pressure. There may be some proof that blood sugar is also lowered when the plant is used regularly.

Powerful antioxidants are present in the toothache plant. They may help in the fight to prevent cancer and strokes in many patients. The immunity is also boosted which can help fight off various diseases.



# Vanilla Orchid

**Family:** Orchidaceae

**Botanical Name:** *Vanilla planifolia*



## DESCRIPTION

Native to the tropical areas of Central America and Mexico, the vanilla orchid is a member of a family of plants that number over 20,000 - the *Orchidaceae*. What makes this climbing, evergreen plant so unique and highly sought after is the fact that it is the only orchid that produces an edible and (agriculturally) valuable crop. This one species of orchid is responsible for over 90% of the world's trade in vanilla beans.

Vanilla orchids are one of the less than 100 climbing orchids. The plant has a vining ability that allows it to climb up shrubs and trees to heights of up to 80 feet. It doesn't start blooming until it is about 3 years old. When it does bloom, it is for one day a year and then for only a few hours. Because of this, commercially grown vanilla orchids must be pollinated by hand. The window of opportunity is small so growers are vigilant about watching for that magical bloom to appear.

## FOOD USES

Vanilla is the second most expensive spice in the world. When you consider the growing effort combined with the elaborate processing, it is understandable. Vanilla is also the second most popular flavor in the world, coming in just behind chocolate. It is used to flavor drinks, sugar, dairy products, and alcohol. It is also the most common flavoring for baked goods and sweet treats. Some savory dishes also call for a splash of pure vanilla.

Studies are showing that vanilla may have a role in food preservation due to the antifungal and antimicrobial properties it contains. This may help in reducing the amounts of chemical preservatives many foods now rely on for freshness.

## MEDICINAL USES

While there isn't a lot of scientific data to back it up, vanilla has historically been used to treat anxiety, fever, hysteria, and spasms. The aroma and taste have a calm and soothing effect. There is some belief that gastric complaints and stomach upset can also be relieved with vanilla.

Some studies that have been completed are suggesting that vanilla can play a part in treating and possibly preventing the sickle-cell blood disorder. It may also help in the fight against several types of cancer.

## OTHER USES

Pure vanilla has often been used as an aphrodisiac as well as a stimulant. Many perfumes, toiletries, and candles are scented with vanilla as the enticing aroma brings up sweet memories and feelings. The scent also has a freshening aspect that helps with stale or unpleasant odors.

Tests have shown that vanilla kills mosquito larvae. When applied to the skin it also acts as a repellent to adult mosquitoes and other insects such as flies and ticks.



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## About New Earth Mandala

New Earth Mandala is a tropical farm, yoga and mindfulness retreat, and learning center. We created the place to help each community member and guest become the best, clearest, most powerful version of themselves, with the mind, body, and spiritual skills needed to do their best work in the world.

New Earth is a beautiful place to dive in. We make our home on the Big Island (called Hawaii), the wildest of the Hawaiian Islands. We're on a powerful living mountain, Kilauea, an offshoot of the great volcano Mauna Loa. We have a quarter mile of ocean horizon, with beautiful sunrises and trade winds.

New Earth Mandala is 35 minutes to the airport at Hilo, 15 minutes from the town of Pahoehoe, a great organic food store, small restaurants, basic chains stores, and basic services (eg. medical). We're even closer to the micro-town of Kaimu/Kalapana, with its Wednesday night local market (and live music). We're a short 10-minute drive to the active lava flow trailhead in Hawaiian Volcanoes National Park. The Mandala is walking distance to weekly ecstatic dances, and driving or biking distance to the incredible warm pools at the other end of lower Puna, great snorkeling at the tide pools, the black sand clothing-optional beach at Kehana, as well as the world class retreat center Kalani which has a wide variety of public classes 7 days a week.

A mandala is a spiritual and ritual symbol representing the powers at work in the universe and the connection between the outer world (the macrocosm) and man's inner world (the microcosm). The mandala is regarded as a place that is set-aside from suffering, a place of nirvana and peace. The heart of the mandala is populated by deities and buddhas.

In psychology, the mandala represents the dreamer's search for completeness and self-unity and can help one "to access progressively deeper levels of the unconscious, ultimately assisting the meditator to experience a mystical sense of oneness".

We are consciously stepping into the physical mandala of New Earth to create an awake community, with the intent to see it ripple out and create impact in the world.

What might we effect together?



**NEW EARTH**  
M A N D A L A