

Lemongrass – Flavoring, Ornamental Grass, or Dragon Repellent?

Cymbopogon citratus

The genus ***Cymbopogon*** includes 56 species. The name comes from the Greek words **kymbe** meaning a boat and **pogon** meaning a beard which alludes to the form of the flowers. This genus is in the **Poaceae** (pō'āsē, ē) or Grass Family and is unique among grasses because its leaves are fragrant. The specific epithet of West Indian lemongrass, ***citratus***, means resembling citrus in reference to its scent and flavor.

West Indian lemongrass is the species that is the most satisfying for cooking. It is most popular as the lemony flavoring in Thai, Vietnamese, Laotian, and Cambodian food and is widely cultivated in Southeast Asia for that purpose. However, whether or not it is used in the kitchen, it is an outstanding ornamental grass.



History

- The origins of West Indian lemongrass are unknown. There is conflicting evidence as to other species in the genus with possibilities being India, Sri Lanka, Malaysia, and Southeast Asia.
- It was introduced extensively to Southern Asia since precolonial times.
- There are reports that it was being distilled for export as early as the 17th century in the Philippines.
- After World War I, lemongrass was introduced to Madagascar, South America, and Central America.
- The first samples of the closely related plant that produces citronella oil were displayed at the World's Fair at London's Crystal Palace in 1951.
- Lemongrass has naturalized throughout the tropics and subtropics worldwide and is grown in greenhouses.
- The chief source of imported lemongrass oil is Guatemala with India in the oil production business as well.

Folklore

- “Lemongrass is the primary ingredient of van van oil, one of the most popular oils in conjure; the act of calling upon or summoning a spirit, demon, deity or other supernatural agent. It is used in this preparation and on its own in hoodoo to protect against evil, spiritually clean a house, and to bring good luck in love affairs. Hoodoo also known as Lowcountry Voodoo in the Gullah South Carolina Lowcountry, is a traditional African American folk spirituality.”(Wikipedia)
- “Lemongrass is said to repel dragons and serpents, and is burned, bathed in, or carried on the person for lust, fidelity, honesty, growth, strength, psychic powers, and purification. Plant lemongrass around the home to repel serpent energy. Drink a tea to aid in psychic abilities and divination. Carry it in a sachet or charm to attract the object of your desire and to bring honesty to your relationships. Burn as an incense for strength and purification.” (Herbalpedia)

Plant Characteristics (Plants are available at local nurseries and garden centers.)

- **Plant Type** – Lemongrass is a half-hardy, clumping, perennial.
- **Hardiness** – It is evergreen in zone 10 & 11 with roots hardy only to zone 9. It is treated as a tender perennial in central VA so must be taken indoors before the first frost if it is to be overwintered. If left outdoors after frost, plants will die but the leaves will turn tan and add winter interest to the garden, at least for a while.
- **Plant Size** – The plant can get to be 2 to 4' tall by 2 to 3' wide in one growing season. Plants in the ground will grow larger than those in containers. If plants are overwintered in containers, the clump width increases from year to year as more stems are produced.
- **Leaves** – The plant has up to 3' long, fibrous, light green, gracefully arching, strap-like leaves that are narrow and flat. They are sharp on the edges and rough to the touch. The leaves taper to a point at the tip, and taper to a sheath at the cane-like bulbous base.
- **Flowers** – In warm areas where it grows year-round, flowers appear throughout the summer; they are brownish-red in a loose inflorescence. However, this plant rarely flowers in cold climates or in cultivation.
- **Scent & Flavor** – Leaves emit a faint lemony fragrance when bruised. The scent and flavor are strongest at the thick bulbous portion at the base, being a mix of lemon, ginger, and mint.

Cultivation

Lemongrass is a very attractive, easy care, rapid-growing, ornamental grass for herb gardens, garden borders, edges along walkways, and for containers (which should be at least 6" deep).

- **Soil** – It can handle just about any garden soil, but grows best in organically rich loams that are well draining. Commercial potting mix is fine for container plants.
- **pH** – The extremes of pH are 4.3 to 8.4, with the average being 6.0.
- **Light** – It prefers full sun but can tolerate light shade.
- **Temperature** – It grows best in temperatures between 64 and 100° F. It is evergreen in the tropics, but is frost sensitive elsewhere, dying back below 28° F. Prolonged temperatures below freezing will eventually kill the entire plant.
- **Water** – Plant is shallow rooted so needs a medium and consistent amount of moisture during the growing season but needs the soil to be well-drained. If grown in a container, there should be plenty of drainage holes in the bottom of the pot. It requires 40 to 100% relative humidity. Since summer in central VA has high humidity, spraying is unnecessary.
- **Fertility** – Plants grown for ornamentation are not as fussy about soil nutrition, however, fertilizer will provide for the plumpest stalks. Garden soil enriched with a balanced, slow release fertilizer provides season-long feeding. Commercial potting mix with fertilizer offers the same purpose but should be replenished mid-season with a balanced, slow-release fertilizer. Apply a balanced, water-soluble fertilizer every 2 to 4 weeks during the active growing time. Cease feeding as the weather turns cold and during the off season.
- **Diseases & Pests**
 - No serious insect or disease problems, although spider mites can be a serious pest on indoor plants.
 - On the Bright Side:
 - Lemon grass oil has been tested for its ability to repel the pestilent stable fly, which bite domestic animals.
 - Beekeepers sometimes use lemon grass oil in swarm traps to attract bees.

Propagation

- **By Seeding** – There are only a few sources for *Cymbopogon citratus* seed; search online and check the botanical name carefully since plants in the genus look alike.
 - To **sow indoors**, sow seeds in prepared seed starting mix and place under protection at 68° F. Germination will take 15 to 25 days. Grow in your sunniest window. Once the seedlings are large enough to handle, pot them up using a commercial potting mix which contains fertilizer, and grow until well established before planting out or up-potting.
 - To **sow outdoors**, sow in pots as above but wait until after the last frost date.
- **By Division** – Take divisions from plants that are more than a year old with established crowns.
 - **In the Fall** – This is a good way to pot up starts for the following year's plants.
 - Gently remove individual stems from the crown. Cut off the top growth right above the swollen part of the stem. Place stems in small pots filled with commercial potting mix containing fertilizer just deep enough to bury the roots; planting too deeply can cause them to rot. Place in a warm spot away from cold drafts. Each pot can contain one or more stems. Grow in a greenhouse or in a most sunny window.
 - **In the Spring** – In our climate, division will most likely be done in spring from plants that were held dormant over the winter (see p.5). It is done just before plants are ready to be brought outdoors, once all danger of frost has passed.
 - Remove the plant from the pot and separate individual stems or clumps of stems either with your fingers or two small forks, teasing them apart. Large, old clumps may be very dense and may need to be sawn apart. Do the best you can to save as many of the stems as possible. Plant clumps in a garden bed, or repot into containers large enough to accommodate the roots using commercial potting mix which contains fertilizer.
- **Potting Up Fresh Lemongrass from the Market** – This is an iffy method since the source and species are unknown. Buy lemon grass stems to use as starter plants; if they have bits of healthy roots, all the better. Place the bulb ends in pots of potting mix making sure not to bury them too deeply to prevent rot. Cover with a plastic bag until roots appear which can take anywhere from two weeks to a month. Then remove the bag and watch them take off.

Harvesting

If you are growing lemongrass simply as an ornamental or your plants are young and the stalks have not had time to thicken up, lemongrass stalks are available in Asian markets and have also become more available in local grocery stores year-round. However, the thick stalks on older plants can be used in the kitchen. Harvesting can be done during the growing season anytime the plant is in active growth. A good time to do a large harvest for preserving is in the fall before the first frost.

- **Harvesting & Preparing the Leaves** – The leaves have a minimal amount of flavor, so are mainly used to make tea. They are fibrous and difficult to chop with a knife; using a scissor works best.
- **Harvestings & Preparing the Bulbous Shoot Base** – This is the most flavorful part of the plant. To harvest, cut the stalk from the plant at soil level and trim away any roots as well as the grass blades, leaving a section of about 6" long. This may be simply smashed with the side of a large knife to bruise it and break it open, added to the pot of a long cooking dish, and then removed before serving. If the herb is to be part of the final dish, peel away the outer, tough layers exposing the inner, more tender portion. This can be very thinly sliced up to the spot where it gets fibrous and then used as is, mashed in a mortar and pestle, or ground in a food grinder. It may also be grated on a microplane. Wrapped fresh, it will last 2-3 weeks in the refrigerator.

Preserving

- **Leaves**
 - Leaves lose the minimum amount of flavor they have very quickly so do not preserve well. They lose most of the lemon flavor and are more vegetal tasting.
- **The Bulbous Shoot Base**
 - **Freezing** is the best method for holding the most flavor for the longest time when preserving this portion of lemongrass. Its intended use, will determine how it is prepared and whether it is frozen whole or sliced. Frozen lemongrass will last about at least a year. Whole stalks can be grated right out of the freezer before they thaw on a microplane.
 - **Air-dried** lemongrass loses its volatile oils so becomes less complex and more woodsy in flavor. It will also have a shorter useful life than when frozen.

Overwintering in a Dormant State

Since lemongrass is a tender perennial, in order to save the plant when the weather turns cold, it needs to be brought into a greenhouse or indoors. This can be quite a feat since the plant is in no way petite having put on lots of growth in just one season. If space in a very sunny spot is available, this is an option. Since it will not be actively growing, it will not need as much water and there should be no fertilizer applications.

It is, however, much easier to hold a plant in a dormant state in a frost-free environment; the temperature shouldn't dip below 40° F. The goal is to get the plant out of the cold before the first frost and keep the root system alive during the cold months.

- **Potting the Plant** – If the plant is not already being grown in a container, the entire clump or portion of the clump to be saved will need to be dug from the garden and put into a pot with drainage holes that is filled with commercial potting mix. The pot should be just large enough to fit the root system snuggly and have a minimum depth of 6" although it can be deeper. Plant should be potted at the same level it was in the garden. If the plant is already in a container, bring it in as is.
- **Preparing the Plant** – Top growth should be cut down to within 6" above the soil or right above the bulbous portion. After being watered well and allowed to drain, the pot is ready to be brought into a warmer, sheltered spot. An unheated basement or frost-free garage works well. A dark area is fine since plants will not be growing.
- **Cold Weather Care** – Very little attention is needed. Every month or so, the plant might need a little water to keep the soil just slightly moist.
- **Spring Preparations** – In spring, as the days lengthen and the temperatures rise, new grassy leaves will start to grow. Once there is no longer a danger of frost, the plant can be made ready for the growing season. This is also a good time for dividing if more plants are desired. Begin by starting a regular watering routine. If the plant is earmarked for a garden bed, it needs no prep. For a pot bound plant that will be grown in a container, up-pot in new potting mix which contains fertilizer. If a container plant needs no up-potting and is to be brought out as is, give it a dose of a balanced, slow-release fertilizer following label directions for the amount to use.
- **Acclimating to Outdoors** – Over a period of a week or two, gradually expose the plant to sunlight, wind, and rain. Once acclimated, the container plant can stay outdoors full time, and if it will spend the growing season in a garden bed, it can be dug in. Amend the garden soil with a balanced, slow-release fertilizer and plant on a cloudy day, if possible, since this is less stressful for the plant. Water in well to settle the soil around the roots.

Uses of *Cymbopogon citratus*

- **Commercial Use** – Lemongrass is used in the food industry to flavor dairy, desserts, candy, chewing gum, and baked goods.
- **Home Use**
 - **Kitchen Use** – Lemongrass is typically used in Thai, Vietnamese, and other Asian dishes but can be used any place a lemon flavor is desired without the acid of lemon juice.
 - **Compatible Foods** – baked goods, beverages (hot & cold tea, cocktails), coconut & coconut milk, curries & curry paste, dairy based puddings & desserts, fish & shellfish, fruit, honey, lime juice, marinades, meat (beef, pork), noodles, peanuts, poultry (chicken, duck), rice & grains, salads & dressings, soups, spice rubs, stews, stir fries, vegetables
 - **Herb Compliments** – basil, chili peppers, chives, cilantro, cinnamon, cloves, coriander, galangal, garlic, ginger, kaffir lime leaves, mint, onions, parsley, sage, scallions, shallots, turmeric, vanilla
 - **Craft & Beauty Uses** – potpourri, perfumes, skin toner, fragrance for bath items, aromatherapy for relaxing and lifting the spirits
- **Medicinal Folk Remedies with Little Scientific Research or Proof:**
 - The essential oil is antiseptic, antibacterial, antifungal, and deodorizing.
 - Used internally for digestive problems and minor feverish illnesses.
 - Used externally for ringworm, lice, athlete's foot, arthritis, and scabies.
 - May relieve pain and swelling, improve levels of sugar and cholesterol in the blood, and have antioxidant properties.
 - **Warnings:** Some sources note that it is undetested for human safety. The essential oil should not be used internally without supervision. Prolonged handling of lemongrass may cause contact dermatitis especially when exposed to sunlight (itching, burning, stinging, reddened or blistered skin). The essential oil should not be used internally by children, women who are pregnant or breast-feeding, or people with liver or kidney disease.

Other Fragrant & Economically Important Plants in the *Cymbopogon* Genus

- ***Cymbopogon flexuosus***, known as East Indian lemongrass, has its origins in Indonesia and is grown principally for the essential oil that is distilled from it and used commercially for soaps, perfumes, and lemon-scented household products. It is also sold for aromatherapy and other herbal remedies.
- ***Cymbopogon nardus*** is known as Ceylon Citronella Grass and is used for medicinal purposes and to produce citronella oil that is used as an insect repellent and in making candles and fragrances.
- ***Cymbopogon martini*** is known as Indian geranium, gingergrass, and palm rose since it has rose scented foliage. It is used to produce an essential oil used to perfume cosmetics and soap.



References

The Big Book of Herbs, Arthur O. Tucker & Thomas DeBaggio, Interweave Press, Loveland, CO, 2000.

The Bountiful Container, Rose Marie Nichols McGee & Maggie Stuckey, Workman Publishing, New York, 2002.

The Complete Herb Book, Jekka McVicar, Firefly Books, Buffalo, New York, 2008.

Herbs & Spices, The Cook's Reference, Jill Norman, DK Publishing, New York, 2002.

The New American Herbal, Stephen Orr, Clarkson Potter, New York, 2014.

New Encyclopedia of Herbs & Their Uses, The Herb Society of America, Deni Bown, DK Publishing, New York, 2001.

Websites:

Hebalpedia herbalpedia.com/blog/?p=73

Missouri Botanical Garden Search for plant by *Cymbopogon citratus* or lemon grass
missouribotanicalgarden.org/plantfinder/plantfindersearch.aspx

National Center for Biotechnology Information

Science & a list of countries & how they use the plant medicinally
ncbi.nlm.nih.gov/pmc/articles/PMC3217679/

Plants for a Future pfaf.org/user/Plant.aspx?LatinName=Cymbopogon+citratus

Science Direct Scientific comparison of *C. citratus* and *C. flexuosus*
sciencedirect.com/topics/neuroscience/cymbopogon-citratus

Web MD webmd.com/vitamins/ai/ingredientmono-719/lemongrass

Wikipedia en.wikipedia.org/wiki/Cymbopogon_citratus
en.wikipedia.org/wiki/Cymbopogon

Compiled by Terry Festa – Goochland-Powhatan Master Gardener, October 2019

