

Lemongrass: Its uses, medicinal and industrial properties

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Introduction:

Lemongrass constitutes the perennial grasses of robust habit with height up to 5-6 feet native to Southeast Asia, grown in tropical regions for their lemon-scented foliage uses as a seasoning and that is the source of aromatic essential oil.

Species:

Cymbopogon citratus (West Indian lemongrass),

Cymbopogon flexuosus (East Indian lemongrass)


Genus: *Cymbopogon*

Family: Poaceae

East Indian lemongrass (*C. Flexuosus*), also called Cochin grass or Malabar grass, is native to Cambodia, Vietnam, Laos, India, Sri Lanka, Burma, and Thailand, while West Indian lemongrass (*C. Citratus*) or simply lemongrass is native to Maritime Southeast Asia and introduced to many tropical and sub-tropical regions worldwide. These are cultivated through short branched rhizomes. They rarely produce flowers, typically from flowering panicles.

Uses:

<i>Cymbopogon citrates</i>	<i>Cymbopogon flexuosus</i>
<ul style="list-style-type: none">• The leaves traditionally used in cooking.• Dried leaves can be brewed into teas or as a flavouring agent in other teas, imparting a flavour reminiscent of lemon juice.• Also used as an herb in cooking.• It has an extreme significance due to its	<ul style="list-style-type: none">• The most prominent use of East Indian lemongrass is for its essential oil.

<p>aromatic essential oil which is extensively used in medicine, perfumery and several other industries.</p>	<ul style="list-style-type: none"> • It also has some culinary uses but mostly <i>C. citratus</i> is used in cooking as it is more edible. 
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Lemongrass might help prevent the growth of some bacteria and yeast. Beekeepers sometimes use lemongrass oil in swarm traps to attract swarms/insects. Its oil has also been tested for its ability to repel flies, those harms domestic animals.

Medicinal properties: Lemongrass contains substances those;

- Helps in relieving pain and swelling,
- Reduces fever,
- Improves sugar levels and cholesterol in blood and maintains blood pressure,
- Stimulate the uterus and menstrual flow,
- Have antioxidant properties and can be used as detoxifier and clean the kidney, liver, pancreas, digestive tract and bladder.
- Its' essential oil also has antidepressant, astringent, nervine, sedative effects.



Industrial properties:

The essential oil extracted from lemongrass through steam distillation process. It has many industrial advantages listed below:

Industry	Properties
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Perfumery	Lemongrass oil is widely used for the isolation of citral, an important perfumery compound.
Food and flavoring	Used as a flavoring agent in various beverages.
Cosmetics	Lemongrass oil is used in soaps, household cleaners and detergents.
Insect repellent	It provides protection from mosquitoes, insects

Conclusion:

For its wide range of uses as well as medicinal and industrial properties, lemongrass is extensively used throughout the globe. It is commonly cultivated as culinary and medicinal herb because of its scent resembling lemon. Lemongrass is one of the groups of Genus-Cymbopogon along with Palmarosa, Citronella, and Ginger grass. The lemongrass oil is extracted from its leaves through the process of steam distillation and constitutes the several chemical constituents (listed in the table) out of which geranial, neral and geraniol are major constituents those are used prominently.

Chemical constituent	Percentage
Limonene	0.5%-3.5%
6-Methyl-5-heptone	0.1%-2%
Caryophyllene	0.2%-3.5%
Neral	25%-35%
Geranial	35%-47%
Geranyl acetate	0.5%-6%
Geraniol	1.5%-8%

Due to its major role as medicinal and aromatic plant, lemongrass is cultivated in mostly all tropical and sub-tropical regions of the world and even in hotter temperate regions as it is frost hardy