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## Lemon Grass—As a Insect Repellent and Aromatherapy

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**L**emon grass is native to India. It is also known as Citronella.

Citronella Grass *Cymbopogon nardus* and *Cymbopogon winterianus* is similar to the species above but grows to 2 m and has red base stems. These species are used for the production of citronella oil, which is used in soaps, as a mosquito repellent in insect sprays and candles, and also in aromatherapy, which is famous in Bintan, Indonesia. The principal chemical constituents of citronella, geraniol and citronellol, are antiseptics, hence their use in household disinfectants and soaps. Besides oil production, citronella grass is also used for culinary purposes, in tea and as a flavoring.

### **Binomial name *Cymbopogon nardus*:**

*Cymbopogon nardus* is a perennial of the Poaceae grass family, originating in tropical Asia. It is commonly used as an essential oil known as "citronella oil". Citronella grass is native

to Cambodia, India, Sri Lanka, Burma, and Thailand while the West-Indian lemon grass (*Cymbopogon citratus*), also known as serai in Malay, is assumed to have its origins in Malaysia. Indonesian people used to call it *serai* too or *sereh*. While both can be used interchangeably, *C. citratus* is more suited for cooking. In India *C. citratus* is used both as a medical herb and in perfumes.

### **Citronella oil:**

It is one of the essential oils obtained from the leaves and stems. Oil of Citronella has been used for over 50 years as an insect repellent and as an animal repellent. It is found in many familiar insect repellent products: candles, lotions, gels, sprays and towelette wipes. These products, which vary in efficacy, repel various insects, some of which are public health pests, such as mosquitoes, biting flies and fleas. Oil of Citronella is volatile, liquid oil derived from dried cultivated grasses. It works on insects without harming or killing them. It has a distinctive odor which may make it difficult for some pests to locate a host. The length of repellency time varies with the inert ingredients and the amount of citronella oil in the product.

### **Types:**

*Citronella oil* is classified in trade into two chemotypes:

– Ceylon type (obtained from *Cymbopogon nardus* Rendle) consists of geraniol (18-20%), limonene (9-11%), methyl isoeugenol (7-11%), citronellol (6-8%), and citronellal (5-15%).

– Java type (obtained from *Cymbopogon winterianus* Jowitt) consists of citronellal (32-45%), geraniol (11-13%), geranyl acetate (3-8%), limonene (1-4%). The higher proportions of geraniol and citronellal in the Java type make it a better source for perfumery derivatives. The name *Cymbopogon winterianus* is given to this selected variety to



### **Key words :**

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