

## Lemon scented plants



There is an increasing demand for the plant material as a source of natural products used as flavours, fragrances, cosmetics, pharmaceuticals and as agrochemicals. This is creating a large market of aromatic plants found in wild and cultivation. Horticulturists and agronomists are dedicated to improve the quality and agronomic potential of various plants. Some species are very variable in the wild, and many crosses between different plants are possible, extending the combination and creation of new flavours whereas other scientists are always looking for new plants which could lead to commercially successful sources.

The extracts from lemon scented plants are used in many ways: as masking

agents in pharmaceutical preparations, as flavouring in foods and soft and alcoholic drinks, in aromatherapy and as agrochemicals. Citrus and lemony flavours represent a very large portion of the world market for flavour ingredients. An expanding market for lemon flavoured drinks uses the oils of lemon, orange, neroli, mandarin, grapefruit and bitter orange. Traditionally, lemon-like and other citrus flavours and fragrances are produced from a blend of lemon, orange, mandarin and bergamot volatile oils at varying concentrations; limonene, dipentene, citral and citroptene oil constituents are important to the aroma. Lemon scented oils are also in great demand for use in aromatherapy. The main properties attributed to their application are analgesic, antidepressant, aphrodisiac, antiseptic, antispasmodic, carminative, cordial, deodorant, digestive, expectorant, sedative and tonic.

A large number of plants have a delightful and refreshing lemon scent, amongst the most popular and widely known are lemon balm, thyme, basil, catnip and monarda, all members of Labiatae family. However, many other species including shrubs, trees and grasses from both temperate and tropical

regions possess a pleasant lemon fragrance.

K. P. Svoboda and R. I. Greenaway at UK have reported that a large number of plant species has wonderful citrus scent, or just a pleasant hint of lemon fragrance. Leaves, flowers, needles, cones or wood can be the source of original material. Review published by them gives a summary of both established and new species on the world market, with detailed description of five more unusual representatives of this group, including the chemicals responsible for the lemon scent. Out of about 54 species listed in the paper following species are found in India also: *Pereskia aculeata* Mill., *Cucumis melo* Linn., *Morina longifolia* Wall., *Pelargonium capitatum* Ait., *Cymbopogon citratus* Staff., *Cymbopogon nardus* (Linn.) Rendle, *Melissa officinalis* Linn., *Mentha piperata* var. *citrata*, *Nepeta cataria* Linn., *Callistemon citrinus*, *Eucalyptus citriodora* Hook., *Oenothera odorata* Jacq., *Passiflora foetida* Linn., and *Aloysia triphylla* (L' Herit.) Britton [Svoboda & Greenaway, *Intern J Aromatherapy*, 2003, 13(1), 23-32].

### Wild flavouring plants of Assam

Researchers at Assam Medical College recorded following wild flavouring plants used by various ethnic groups of Assam. *Achasma loroglosseen* Linn. ( rhizome), *Allium wallichii* DC. (Bulbs/cloves and aerial parts), *Aquilaria nalacensis* Lam. (leaves), *Blumea balsamifera* DC. (leaves), *Citrus hystrix* DC. (fruits, peels and leaves), *Capsicum frutescens* var. *baccatum* Iris (fruits), *Curcuma amada* Linn., *Eryngium factidum* Linn. (leaves), *Hedyotis corymbosa* (Linn.) Lam. (entire plant), *Homalomena aromatica* Linn. (aerial parts and rhizome), *Paederia scandens* Lour. (tender leaves), *Sarcochlamys pulcherrima* Gand. ( leaves), etc. Out of these plants *Aquilaria nalacensis* Lam., *Achasma loroglosseen* Linn., *Curcuma amada* Linn. and *Homalomena aromatica* Linn. contain good amount of essential oil content hence they may be further exploited for commercial purposes (Gogoi, Ethnomedicine of North-East India, Proceedings of National Seminar on Traditional Knowledge base on Herbal Medicines and Plant Resources of North-East India, held on 13-15 March, 2001,published 2003, p. 292).