

# Spicing it up

Spice gardens for beginners

Part 4: Kaffir Lime, Lemongrass & Curry Leaf



Kaffir lime trees are small and compact, making them a great addition to any hydroponic spice garden.

**W**hile chilies may be a well known and widely grown hydroponic spice, there are a few other spice plants that often accompany hot chilies in many cuisines that are easy, fun, attractive and intriguing to grow. Citrus-like, aromatic kaffir lime leaves, fragrant lemongrass and distinctive and exotic curry leaves all have flavor notes we have come to know and love in many Asian and ethnic dishes and they can all be part of a hydroponic spice garden.



## Kaffir lime

Kaffir lime (*Citrus hystrix*) is a small growing citrus tree also known as Kieffer lime and limau purut. While Kaffir lime is less well known than the lime varieties grown

specifically for fruit, it is a very versatile plant easily grown in hydroponics and due to its small and compact frame is a great addition to indoor grow rooms or as a houseplant. It also has potential for sale as a fresh-cut herb produced by smaller hydroponic growers year round. Kaffir lime is grown mostly for its foliage which has a distinctive, strong, lemon-lime aroma and flavor. The peel of the small knobby fruit is also used — it's ground to a paste and included in many Asian dishes and curries. Kaffir lime leaves are a very popular spice in Thailand and are added to nearly every Thai soup, stir fry and curry. For those who love cooking hot, spicy and pungent Thai and Asian dishes, having a supply of fresh Kaffir lime leaves and fruit on hand adds an extra gastronomic dimension to this type of cuisine.

Growing Kaffir lime in hydroponics is relatively easy because the plants can handle

cooler conditions than the fruiting varieties of lime tree and the plant can be kept to a small and compact size to fit into any system. Young plants can be purchased from garden outlets or herb producers — these are grown from cuttings and should be fully hardened off before planting into a hydroponic system. Since Kaffir lime trees will grow and produce fruit and foliage for many years, they are best grown in a good-sized media bed or container. Growing media such as perlite, expanded clay, coco fiber and rockwool are suitable for production and lime trees can be grown in the same bed or system as other plants such as chilies, lemongrass and other heat-loving spices. A standard vegetative hydroponic nutrient is recommended during the early stages of growth, with a bloom or flowering nutrient applied once the plant has produced small fruitlets. As with many of the hardy spice plants, the concentration of aromatic



Distinctive, winged leaves of the kaffir lime tree.



Small, knobby, kaffir lime fruit are ground to paste for use in curries and other dishes.

oil produced in the foliage is determined by growing conditions. Warmth, high light, increased EC and slight moisture stress will concentrate flavor and aromatic compounds in the plant, giving a higher-quality harvested spice. If spice plants such as kaffir lime are grown in cooler conditions with insufficient

light and a low EC, the flavor constituents become diluted in the plant and less volatile compounds are produced. This is a major advantage of a hydroponic system and winter grow room where light, temperature and plant nutrition can be manipulated to get the highest quality spices year round.

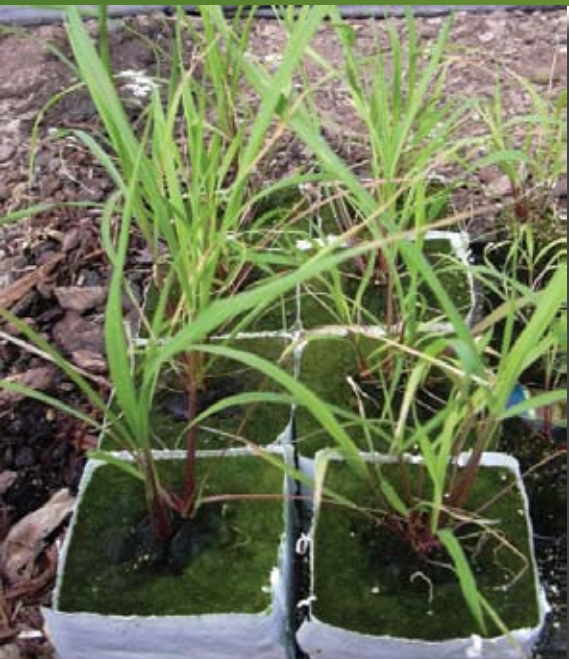
In an indoor or limited space situation, these lime trees need to have the growing tip removed at a young age to force the plant to bush out, producing more foliage for harvest. New foliage has a distinctive red-brown color in contrast to the lime green of the older mature leaves. Ideal temperature conditions for rapid growth are 22 to 32 degrees C, however plants will happily survive cooler conditions and even light frosts. Under hot, dry conditions the plants are prone to pests such as mites which need regular control with safe sprays such as neem oil or the introduction of predator insects. Harvesting of kaffir lime leaves should take place just before use — the older, mature leaves should be cut from the plant with care, so as not to remove too much foliage and weaken the plant at any one harvest.

## Lemongrass

Lemongrass is a popular hydroponic herb which can grow at very rapid rates under warm growing conditions. While a mature lemongrass plant can be as large as two meters in diameter with leaves of over one-meter long, younger and smaller plants can be grown in limited spaces if kept well-trimmed. Use of NFT is not recommended due to the large and fibrous root system which rapidly develops which can cause system blockages and slow the flow of nutrient. Lemongrass is a perennial herb widely cultivated in the tropics and subtropics of which are two different species: East



Kaffir lime tree showing young flower buds.



East Indian Lemongrass is easily raised from seed and grows well in warm, well lit hydroponic systems.

Indian lemongrass (*Cymbopogon flexuosus*) and West Indian lemongrass (*Cymbopogon citrates*) also known as Malabar grass. West Indian lemongrass can only be propagated from root division since the plants rarely flower or set seed. Division can be carried out on plants older than one year, starting with the second year of growth. However East Indian lemongrass (*C. flexuosus*) can be easily raised from seed and is the better choice for hydroponic growers. Since the leaves of even small seedlings have the distinctive lemon-lime flavor and aroma, young plants can be raised in hydroponics and cut for use as required.

Lemongrass requires warm temperatures to produce well and develops a strong and distinctive flavor, although it will survive cool conditions in a dormant state. Optimum temperatures are in the range of 18 to 35 degrees C with a high humidity (80 – 100 percent) and full sunlight or high levels of artificial light. Full spectrum grow lamps are recommended for many spices such as lemongrass because evidence suggests that certain parts of the light spectrum such as UV assist with the development of flavor compounds in these plants. Lemongrass grows well in hydroponic media beds with a wide range of growing media, however media which naturally holds less moisture between nutrient applications will give stronger-flavored foliage. Expanded

clay, large particle size perlite, pea gravel and similar growing media are a good choice for a high quality spice product. EC levels of 2.2 to 2.4 are recommended for plants once they have passed the young seedling stage, although higher EC levels can be used to help develop stronger flavor and aroma and keep growth compact.

The first harvest of lemongrass foliage is usually carried out when the plants are 20 cm tall. However younger leaves can be harvested and used as required from an indoor spice garden for a more delicate flavor and for use in salad mixtures. Foliage should be cut with sharp scissors not too close to the base of the plant so that regrowth can occur after harvest. Lemongrass may also be grown for harvest of its stalk's tender base as well as the leaf, in this case, the stem is harvested with the leaf base and a small portion of the root attached.

### Curry leaf

(Meetha neem, Karapincha, Daun Kari and Karipattar)

The curry leaf plant (*Murraya Koenigii*) is a must-have for those who regularly indulge in spicy Indian or Sri Lankan curries as it is often considered to be an essential ingredient in many of these dishes. There is often some confusion with curry leaf, due to the fact that a totally different species is termed 'the curry plant' (*Helichyrsom italicum*) which is not related and can not be used in the same way. Some people also wrongly think that ground curry powder is made from the leaf of the curry plant tree, however this is also incorrect. The curry plant is a small tree, native to India and Ceylon which produces attractive segmented, aromatic foliage on a compact plant. Fresh curry leaf is sold as in Indian spice in many produce and ethnic stores, however it loses some of its aroma and flavor when dried, although it can be stored frozen for a short time. For this reason, it's a fascinating plant to have growing in a hydroponic spice garden where it can be plucked fresh for immediate use in curries and many other dishes. Curry leaves are typically fried or sautéed in hot oil to enhance and release the flavor into the dish.

Although the curry plant does grow into a small tree, it can be grown in containers indoors and makes an attractive and aromatic houseplant. It can be grown alongside chilies, lemongrass and kaffir lime as it prefers



The curry leaf plant makes an attractive plant for indoor production. Photo courtesy of Logee's.

the same conditions of warmth, high light and free draining substrates. Indoors curry plants typically grow to one to three feet in containers with a minimum temperature requirement of 13 degrees C. Small curry leaf plants can be obtained from online nurseries, Asian stores and herb producers. The plant can be grown from seed, from off shoots which develop from the base of the plant, and from cuttings taken from fresh curry leaf stems purchased from markets. The main pest problem with curry leaf trees are mealy bugs and occasionally mites under warm, dry growing conditions. Use of Neem sprays and predator insects are a good choice for these plants and careful monitoring of all spice plants is recommended to get pest outbreaks under control as early as possible.

In the final installment of this series on spice gardens we will detail production of garlic and some other spicy alliums as essential companions to many of the spice plants already covered. 🌿

#### Sources of spice plants

- <http://www.fourwindsgrowers.com/>
- <http://www.bayflora.com/citrustrees.html>
- <http://www.bayflora.com/citrustrees.html>
- <http://www.logees.com>
- <http://www.johnnyseeds.com>
- <http://www.bhatia-nurseries.com/curry.htm>
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