



Saffron can be grown in beds, containers or small pots, making it a great crop for small spaces.

**In** the first article in this series on spice gardens for beginners, we covered some system basics and detailed how to grow members of the ginger family. While many hydroponic gardeners love the pungent, spicy zing of ginger, some of the more subtle spices are just as tempting. Saffron is a sought-after, expensive, delicate spice which adds both color and distinctive flavor to many dishes.

Saffron is produced commercially as an outdoor field crop in countries such as Spain, India and Iran where the climate is suitable and cheap labor available for the time-consuming harvesting and processing of the flowers. However saffron is an easy, small-scale crop for hydroponics and bulbs are readily obtainable for those who want to grow the exotic spice.

**Hydroponic saffron production**

Saffron is the world's highest-priced spice and is composed of the bright yellow dried stigma of the saffron flower. The saffron crocus (*Crocus sativus* L) grows from a small rounded corm (similar to a bulb), which after flowering and vegetative growth, multiplies by the production of many small daughter corms. When many realize that this exotic spice is just the inside of a type of crocus flower, grown from a corm, then production seems much less daunting. Each flower produces three strands of saffron on average, weighing in at much less than a gram, hence a huge number of flowers must be grown, picked, processed and dried to make just 100 grams of this spice. For the hobby hydroponic grower or household chef, however, a small plot of saffron should give sufficient spice to last for many months because only a few strands are used in most dishes

**Where to get starter corms**

Saffron corms used to be difficult to obtain, but nowadays corms are sold by various seed suppliers and nurseries in small quantities for home gardeners. Bulk saffron corms can also be purchased on Ebay from time to time, although the supply of these can be seasonal and corms should be readily available from mid summer to autumn in many regions. When buying corms for the first time, its important to realize that like many flowering bulbs, the corms come in sizes from very small (0.6 g) —which would be a non-flowering type requiring an additional season's growth— to very large (24 g). The smaller corms are usually less expensive, but they may not produce flowers in the first season or may produce a much lower yield of saffron and a lower number of daughter corms after flowering. The best planting grade for hydroponics is around 15 g which is usually

# BEGINNER'S CORNER

over an inch in diameter. The corms arrive dry in a dormant state ready for planting out.

## Saffron system basics

Saffron, though quite easy to grow, does need some specific requirements if the objective is to propagate and multiply the plants. There are actually two ways of running a saffron system – the dormant corms can be purchased, usually towards the end of summer or in early autumn, planted, flowered, harvested and the corms discarded, all over a six-week period. Or after the short flowering period, the bulbs can be grown on, producing vegetation and new daughter cormlets over a period of many months, until they become dormant in midsummer. The first system means the corms are planted at a high density since they won't be grown on and multiplied.

The second system needs more space for the plants to fully develop and many months of caring for the corms after they flower, although the reward is a supply of new corms which could be sold or given away to others and a higher yield of flowers in the next year. Tying up your hydroponic system with vegetative saffron for 9 to 10 months however may not be attractive to those with limited space, although trays of saffron plants are hardly ever cold and can be put outside for winter and spring if necessary.

Corms can be stored in a dry place and planted out when the hydroponic system is ready. The spacing should be approximately 4 to 5 inches apart and 1.5 to 2 inches deep in

a tray of free draining, sterile growing media such as coconut fiber with some perlite mixed in. The media needs to support the plants while being friable enough for the young corms to form without deformities so any substrate used for baby root crops would be suitable.

The flowers will have already been initiated in the corms during the summer dormancy period and flowering will occur when moisture is provided and temperatures start to drop in Fall. Flowering is triggered by environmental conditions such as temperate and moisture which is easily manipulated in a hydroponic grow room. The ideal conditions during flowering are a 16-hour day length with day temperatures of 17 C (64 F) and night temperatures of 12 C (54 F). An indoor grow room or greenhouse situation means the flowers are protected from rain, moisture, wind and the lack of weeds makes harvesting of high quality flowers much easier.

## Environmental conditions for hydroponic saffron

After flowering, the foliage grows best at 60 to 65 degrees Fahrenheit (16 to 18 C) with 12 to 14 hours of light to keep enough photosynthesis going to bulk up the developing cormlets. Saffron typically flowers in autumn over a short period, then produces a number of strap-like leaves which grow through winter, spring and into summer, providing food reserves for the corm and developing new cormlets. After flowering and harvest in autumn, foliage will develop quite rapidly and during this time, a standard vegetative nutrient should be given to the plants as required.

Recommended EC levels are 1.2 to 1.4 during this stage. Leaf growth will continue until summer when the young corms start to develop and rapidly develop around the mother corm.

In their natural environment, the saffron plants' foliage dies back in mid to late summer, after the young corms have matured and as conditions become very warm and dry. The corms then go into a dormancy period which is essential for



**A free draining sterile media, some warmth and moisture will give not only colorful blooms but exotic spice as well.**

initiating the next season's flowers which will bloom in the cooler, moist conditions of Fall. In hydroponics we can easily replicate this by drying the media back after the cormlets have formed to a good size in the growing media and the foliage has died back. Having a dig around one of the plant will soon reveal if the corms are ready for harvest and dormancy. The tray of saffron corms, once fully dried down, can be harvested and stored away in a dry, dark place until they need to be planted out for flower production. This is a time-consuming process as the saffron plant does need many months (9 to 10) after flowering, until harvest of the new corms with only one harvest of flowers per year obtained. However, each mother corm, after flowering, will produce a number of (4 to 10 or more) young cormlets that can be used to produce more flowers and greater harvests of saffron spice in the following season. Saffron can also be stored for year-round use, so it is possible to harvest a whole year's supply of the spice over a 2 to 3 week period, dry it correctly and store for use over many months.

A hydroponic saffron bed can be left in place for many years if necessary. The new cormlets don't need to be harvested each season and can be left in place to flower and grow. Overcrowding will occur sooner or later and it's often easier to harvest all the corms, re-plant and re-space each year.

**A harvest of fresh saffron strands, cut from the open blooms, ready for drying and storage.**



## Harvesting saffron

Flowering of the corms will typically occur quite quickly after planting. Within a few weeks the first emerging flower buds should be seen. The flowers will fully open within 3 to 5 days and be ready for harvest. As each flower blooms, it should be plucked or snipped from the plant and taken away for processing. The easiest way of removing the saffron stigmas from the centre of the flower) is to pull back and remove all the petals and then snip the golden strands at the base. These will then need to be dried before storage. Saffron is very delicate and the strands should be placed on white paper and allowed to air dry and fully desiccate. Any slight breeze will blow the strands away and home dehydrators are not well-suited to this. Being small and very light, the saffron will dry within a week in most cases and can then be stored in air tight glass jars. A small package of silicon desiccant can be used to make sure any additional moisture on the strands or in the air does not cause any storage problems. Insufficiently dried saffron can go moldy, so additional air drying time is recommended if humidity levels are high.

While there have been a few studies on the production of soilless saffron, its not known how quality or flavor might be affected with use of hydroponics or indoor production, so connoisseurs of this spice might like to run their own taste panels on their home grown product.

In the next part of this series on growing spices we move from the delicate to the downright dangerous: super hot chilies. 🌶️

## References and sources

"The Growth of Saffron (*Crocus sativus* L.) in Aeroponics and Hydroponics," Fredric V Souret and P J Weathers. Published in: Journal of Herbs, Spices and Medicinal Plants, Volume 7, Issue 3, 2000. ISBN 1049-6475

## Supplies of saffron corms:

<http://www.nicholsgardennursery.com>  
<http://www.whiteflowerfarm.com>  
<http://www.richters.com>

# Inventors of the portable GROW ROOM!

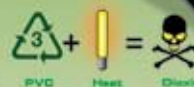


**HOME box**

**THE ORIGINAL**  
SINCE 2001



**NO OUTGASSING!**  
**NO WILTING PLANTS!**  
**NO PVC!**  
**NO BRITTLE MATERIAL!**  
**NO FRAGILE ZIPPERS!**  
**NO RUST!**  
**NO LEAKS!**  
**NO TOOLS!**  
**NO STRESS!**  
**NO DOUBT...**



**the World's no.1 portable grow and dry room!**

- Durable, lightweight precision nylon connectors
- 16mm white powder coated steel poles
- Extra tough, triple-layer laminated, light-proof shell
- Reinforced zippers and stitching
- Reinforced cable and ventilation ducts
- Removable, thermally sealed waterproof basin
- Extra strong ceiling grid for filter and light fixture: **easily supports up to 100 pounds!!!**
- Optional DryNet
- No tools required
- Build it all by yourself



The HOMEbox® Family offers the widest product line available to suit all your needs: HB XS, HB S, HB L, HB XL, HB XL (US), HB XXL, HB XXL (US), HB light, CloneBox, DryNet



**NEW E-SHOP!**

**So easy... even grampa can order it online!**

- Average 5 day delivery
- Easy credit card payment
- All products delivered directly from our USA warehouse
- Delivery only for US & Canada



**Beware of cheap imitations...get the original @:**

**[www.buy-the-homebox.com](http://www.buy-the-homebox.com)**