

# **Indoor Seed Starting Under Lights**

By EMG Charlene Schneider

---



Starting seeds indoors is a simple way to enjoy many plant varieties not commonly found in garden centers. The equipment you need to start seeds indoors ranges from the simple to the complex. The better equipped you are, the more success you will have.

Buy seeds from a reputable dealer, and buy only what you will use the present season. All the information you will need should be printed clearly on the label. This includes the length of time for germination, the depth of the planting, the amount of light and temperature, and the amount of time the seedlings will need indoors before sitting out in the garden.

## **Let's Get Started**

Purchase a premium soil-less potting mix without fertilizer. Mixes designed strictly for seed starting are not needed, and are usually more expensive. Pre-moisten the mix. This is what I like to call the "get down and dirty" process. Using a fairly large container, add soil alternating with water. You'll want the mix to form a clump when squeezed in your palm, but not to the extent of water dripping from it. If it is too wet simply add more mix. Seed can die from lack of oxygen in overly wet soils.

Soil mix that is too dry can also present problems with germination. If the seed at the time of germination cannot absorb enough moisture from the soil, the embryo will die. That's why it is so important for the soil to be evenly moist throughout.



There are many seed starting kits available. Most of your nurseries and garden centers will have a variety of them. You can purchase trays with cell pack inserts, plant starter cubes, or sow in individual containers. There are also peat pots, and "Jiffy 7" pellets. (If using peat pots which are designed for plants that are resistant to transplanting, remove as much of the pot as possible before planting out). What you choose to use is up to you.

---

You'll also need to use a clear cover, lid, or plastic bag, for your container: anything that will keep the humidity level high. Seeds need high humidity to germinate well. This also helps keep the soil moist. When the seeds develop their first set of leaves, remove the cover.

## Temperature

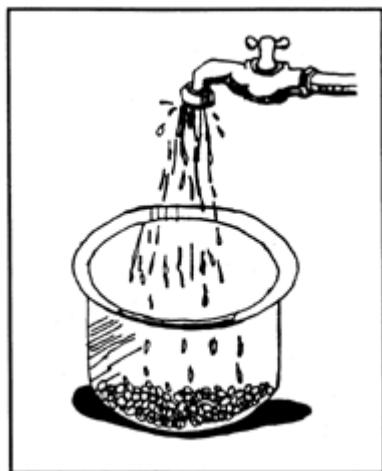
The best temperature for seed starting is between 65 and 75 degrees Fahrenheit. Most seeds will not require additional heating methods such as heat mats. Seeds also benefit from a slightly lower temperature in the evening. Take care not to expose seeds to cold drafts.

Always follow seed package directions for depth of planting. When directions call for seed to be planted at a certain depth, place the seed on the surface, and then apply extra soil on top. Do not sink the seed in the soil, as it may settle and end up deeper than needed. This is one of the reasons seeds fail to germinate: they are planted too deep.

When sowing ornamental grasses, trailing or vining plants such as *Dichondra*, *Sanvitalia*, and *Helichrysum*, ("Silver Mist") always over-sow. Instead of the usual one seed per pot, using four to six seeds produces a fuller more desirable stand. Always buy pelleted seeds when available. They are more expensive but well worth it. Keep in mind that pelleted seeds may need a little extra time to germinate.



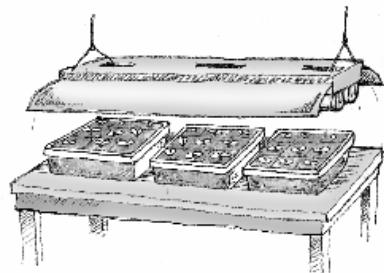
## Scarification or Stratification



Some seeds require scarification or stratification. Scarification simply means that the seed needs mechanical help in breaking dormancy. This could include filing the seed, using cuticle scissors to nick the seed, or soaking the seed up to twenty four hours in warm water.. Most of the larger seeds such as hyacinth bean, morning glories, snail vine, and any seeds that have a very hard coating benefit from this process. Stratification involves chilling the seed, up to three months before exposing them to warmer temperatures. Perennials and most fruit and nut tree seeds require this process. If the package calls for this method, sow the seeds as usual and place the covered tray in the refrigerator. The directions should include either process clearly on the packaging.

## ***Lights***

Suspend fluorescent lights, (shop lights), four to six inches above the tray, or container of your choice. Expensive grow lights are not needed. Plants benefit from fourteen to sixteen hours of light per day, with a resting period of at least eight hours. In order to simplify a schedule, timers are available for your light system. Under the counter fluorescent lights can be utilized also. Be sure to raise the container to the proper height.



After the seedlings germinate, remove the cover and move the container closer to the lights (two to three inches). Do not assume that the seedlings need watering at this time. Because of the high humidity and condensation under the lid, they may not need to have additional moisture for three to four days. If they appear dry, lightly spray or sprinkle water on the soil around the seedling..

## ***Fertilizing Seedlings***

When the young seedlings have three to four sets of leaves, it's time to fertilize. Use a very weak solution of water soluble fertilizer; 1/4 tsp per gallon of warm water. Water sparingly with this solution, and if possible water from the bottom. If you plan on transplanting the seedlings to individual containers, now is the time.

Some seedlings can become overcrowded very quickly, and will benefit from thinning. Choose the strongest looking seedling, and remove the rest, being careful not to uproot the one you're saving. I simply cut the extra seedlings off at soil level.

## ***Pinching Back***



When seedlings develop five to six sets of leaves, pinch out the center. Pinching promotes branching, and better branching promotes bushiness. The plants with more lateral branching in turn will produce more flowers. A simple way to do this is to use cuticle scissors and clip the center most set of leaves.

As temperatures warm and remain above 45° to 50°F degrees, (with the same during the night), acclimate the seedlings to the outdoors. This process is called hardening off and benefits the plants by acclimating them to the conditions that they will be growing. Start by placing them in a shady area, and gradually move them into sunnier locations. Continue for a week to ten days.

After all of your hard work, pat yourself on the back for the terrific job you've done and the beautiful plants that you've grown. Take satisfaction in a job well done.

Good luck, and Happy Gardening.

## Seed Sources

These are the Internet companies that I use the most often. They are very reputable, and have decent shipping charges.

summerhillseeds.com  
harrisseeds.com  
burpeeseeds.com  
parkseed.com  
hpsseed.com  
hazzardsgreenhouse.com  
swallowtailgardenseed.com  
johnnyselectseed.com  
Thompson-morgan.com

There are several local retailers that also carry quality seed, but they may not offer the varieties that the Internet companies do.

*This Publication Prepared by  
Charlene Schneider 2011*

Sedgwick County / K-State Research & Extension Master Gardener ©



*Sedgwick County...  
working for you*

Publication provided by:  
Sedgwick County Extension  
7001W 21st St N  
Wichita, KS 67205-1759  
316-660-0100  
[www.sedgwick.ksu.edu](http://www.sedgwick.ksu.edu)

Kansas State University Agricultural Extension and Cooperative Extension Service. KSU, County Extension Councils and U.S. Department of Agriculture Cooperating. K-State Research and Extension is an equal opportunity provider and employer. "K-State Research & Extension, Sedgwick County, is committed to making its services, activities, and programs accessible to all participants. If you have special requirements due to a physical, vision or hearing disability, please contact Robert I. Neier at 316-660-0100."