

Starting Seeds Indoors

by Rita Pelczar

FOR MOST OF US, January and February are too early to do much outdoors in the garden, so it's the perfect time to think about sowing flower and vegetable seeds indoors. Starting plants from seeds increases your selection, since the variety you can get from seed suppliers is significantly broader than the plants you can find at local nurseries. You will also have the satisfaction of growing your plants from start to finish.

Starting plants indoors requires some time, effort, and dedication; your seedlings will need regular attention for several weeks if they are to develop into healthy garden plants. Then, when it's finally time to move your seedlings outdoors, particular care must be taken to acclimate them to their new growing environment.

SPACE, LIGHTING, AND TEMPERATURE

Little space is needed to sow a few varieties of seeds, but as the seedlings develop and are transplanted to larger containers, their space requirements increase significantly. A sunny, south-facing window may seem like the perfect spot, but windows at night are often the coldest places in your house. And rarely is window light alone sufficient to grow robust seedlings.

Supplementing natural light with fluorescent light or specifically designed "grow lights" can make the difference between weak and sturdy seedlings. Hydrofarm's energy-efficient **T5 Grow Light System**, available from Planet Natural, provides full-spectrum light. Fixtures for either 24- or 48-inch bulbs are equipped to hold between two and eight bulbs each, depending on your lighting needs. Many other systems are available. Supplemental lights should be placed two to four inches above the tops of plants, so it is important that the lights you select remain relatively cool, and a fixture that can be raised to accommodate plant growth is helpful. Lights should remain on for 12 to 16 hours per day, so consider an automatic timer for convenience.

Soil temperature for seed germination varies somewhat among species, but for most annual flowers and vegetable



like the one available from Planet Natural that delivers bottom heat to seed flats. Seeds not only germinate much more quickly, but evenly maintained bottom heat also helps prevent damping-off, a fungal disease that causes young seedlings to topple over and die. Many heat mats are equipped with thermostats; otherwise a soil thermometer is helpful to maintain the correct temperature. The heat mat should be on all the time, so don't plug it into the timer for your lights.

GROWING MEDIA AND CONTAINERS

Because garden soil may harbor disease organisms, a sterile soilless growing medium is best for starting seeds. Many quality mixes are available; select one that has good water-holding capacity and excellent drainage. Since many seeds are tiny, aim for a fine-textured mix.

seeds, the optimal soil temperature for germination ranges between 70 and 80 degrees Fahrenheit. One of the most effective tools I have used for starting seeds indoors is a waterproof electric heat mat



Sources

Drip Depot, Medford, OR.
www.dripdepot.com.

Gardener's Supply, Burlington, VT.
800-427-3363. www.gardeners.com.

Lee Valley Tools, Ogdensburg, NY.
(800) 871-8158.
www.leevalley.com.

Planet Natural, Bozeman, MT. (800)
289-6656. www.planetnatural.com.

Moisten your growing mix thoroughly prior to planting. Use a clean bucket—or better yet—a **Portable Potting Tray**, available from Gardener's Supply. This molded plastic container helps avoid mess when moistening your growing mix, filling containers, and transplanting seedlings.



Seeds can be started in any container that holds sufficient soil and allows for good drainage. Recycled pots such as milk or yogurt cartons with drainage holes added work well. Plastic or wooden seed flats are excellent for sowing rows of seeds that will be transplanted into larger containers. Molded plastic cell flats come in a variety of sizes and provide efficient use of space; seeds can be sown directly into the cells or young seedlings can be transplanted to cells from a germinating flat.

A variety of space-saving seed-starting kits are available. The **Beginner's Seed Starting Kit** from Gardener's Supply includes two 12-cell trays, two clear plastic covers, water reservoirs with capillary mats to ensure even moisture, a bag of organic seed-starting mix, and wooden labels.

The **Self-Watering Propagator Set** from Lee Valley Tools offers seven indi-

SOWING SEEDS AND HANDLING SEEDLINGS

If seeding directly into cells or other individual containers, sow two or three seeds into each. After the seedlings have grown a few leaves, select the strongest seedling in each cell or container and use scissors to remove the others.

Starting seedlings in germination flats is an efficient use of space and heat mats but requires an extra transplanting step. Use a pencil tip to create a straight impression in the growing mix and thinly sow the seed into it. Follow the directions on the seed packet for sowing depth. Keep the medium moist—a spray bottle works well.

After seedlings have developed their third pairs of leaves, transplant them into individual containers or cell flats. A spoon is a useful tool for digging up your seedlings. Always handle seedlings by their roots or leaves, never by their stems, which can be easily crushed. Once planted, water carefully to settle the growing mix around the roots. —R.P.

vidual propagation trays that have vented covers. Because you can adjust the humidity of individual trays, these are handy for germinating different kinds of seeds. This kit, which includes a water reservoir and capillary mat, also works well for rooting plants from small cuttings.

Growing seedlings in fiber pots made from pressed peat, shredded wood, or cow manure allows you to transplant the seedling "pot and all" into the garden without disturbing roots. This is particularly helpful with difficult-to-transplant crops

such as cucumbers and squash. When transplanting, be sure to remove any exposed portion of the fiber pot above the soil line to avoid drying the roots from the wicking action of the fiber. Also re-

move the bottom of the pot to encourage rapid root expansion. Newspaper can be efficiently recycled into biodegradable seedling containers using a clever tool called the **PotMaker**, available from Lee Valley.

Like newspaper and fiber pots, **Rapid Rooter Plugs** from Planet Natural also help reduce disturbance to plant roots when transplanting. Made of composted organic material held together by natural plant polymers, they contain beneficial microbes that promote root growth and nutrient absorption.

HARDENING OFF SEEDLINGS

Before transplanting your seedlings into the garden in spring, they need to be gradually acclimated or "hardened off" to protect them from sudden exposure to cold or sunlight. This is best accomplished by taking your seedlings outside for a couple of hours a day and placing them in a partly shaded area that is protected from wind. Gradually increase the time they are left outside, as well as the duration of sun exposure they receive. After about two weeks they should be ready to transplant into the garden.

Alternatively, a cold frame provides a sheltered location for hardening off seedlings. If you are handy, you can construct one yourself. Or you can purchase ones like the **Single** or **Double Cold Frame** from Drip Depot. If temperatures are likely to drop below 50 degrees Fahrenheit at night, close the lid, but be careful to vent the top on sunny days or your seedlings may bake.



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